FUJITSU

FUJITSU

DL3750+

24-wire dot matrix printers

USER'S MANUAL

FUJITSU

FUJITSU DL3750+

DOT MATRIX PRINTER

USER'S MANUAL
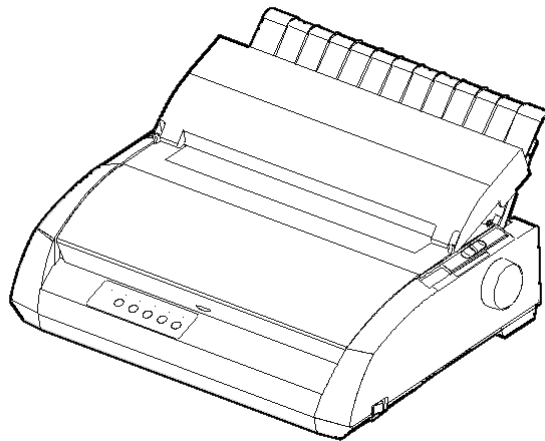
Federal Communications Commission
Radio Frequency Interference Statement
for United States Users

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15B of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measure:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

> **FCC warning**: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTES
1. Testing of this equipment was performed on model number M33331A.
2. The use of a nonshielded interface cable with the referenced device is prohibited. The length of the parallel interface cable must be 3 meters (10 feet) or less. The length of the optional serial interface cable must be 15 meters (50 feet) or less.
3. The length of the power cord must be 3 meters (10 feet) or less.

Notice for Canadian Users

This class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Notice for German Users

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das
• M33331B

in Übereinstimmung mit den Bestimmungen der
• EN 45014 (CE)

funk-entstört ist.
Der Deutschen Bundesport wurde das inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

• Maschinenlärminformationsverordnung 3. GSGV, 18.01.1991:
Der höchste Schalldruckpegel beträgt 70 dB (A) oder weniger gemäß EN 27779-1991.

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As an ENERGY STAR® Partner, FUJITSU LIMITED has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

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CE Declaration

This product sold in Europe conforms to the standard in accordance with EC Directives.

The contents of this manual may be revised without prior notice and without obligation to incorporate changes and improvements into units already shipped.

Every effort has been made to ensure that the information included here is complete and accurate at the time of publication; however, Fujitsu cannot be held responsible for errors and omissions.

Printer model specifications differ with the power supply input voltage (100-120 or 220-240 VAC).

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Other product names mentioned in this manual may also be trademarks of their respective companies.

ABOUT THIS MANUAL

Thank you for buying the Fujitsu DL3750+ dot matrix printer. You can
expect years of reliable service with very little maintenance. This manual
explains how to use your printer to full advantage. It is written for both new
and experienced printer users.

This manual describes how to install, set up, and use your printer and printer
options. It also explains how to keep the printer in good working condition
and what to do should something go wrong. Detailed procedures are provided
for first-time users. Experienced users can skip some of the details, using the
table of contents and chapter introductions to locate information.

This manual has several appendixes, a glossary, and an index. Appendix A
lists supplies and additional documentation and information available from
your dealer or authorized Fujitsu representative. Fujitsu offices are listed at
the end of the manual.

PRINTER MODELS AND OPTIONS

This manual covers model DL3750+, an 80-column printer. This model has a
100-120 VAC or 220-240 VAC power supply. A serial interface is a factory
add-on option. You must specify these when purchasing the printer.

Unless otherwise stated, the information given here applies to both models.
However, illustrations are of either model.

DL3750+
- — Basic specifications
  - Print line at 10 cpi: 80 columns
- — Interface: Centronics parallel
  - Centronics parallel + RS-232C
  - Centronics parallel + USB
- — Alternative specification
  - Power supply: 100–120 VAC or 220–240 VAC
- — User add-on option
  - RS-232C serial interface (for Centronics parallel model only)

  cpi: characters per inch

ORGANIZATION

This manual is organized as follows:

Quick Reference summarizes everyday printer operations. After you become familiar with the printer, use this section as a memory aid.

Chapter 1, Introduction, introduces the printer and identifies key features and options that enhance the printer's capabilities.

Chapter 2, Setting Up, gives step-by-step procedures for setting up the printer for immediate use and identifies the main parts of the printer. If this is your first printer, you should read the entire chapter before attempting to use the printer.

Chapter 3, Paper Handling, explains how to load and use paper with your printer.

Chapter 4, Printing, covers basic printing operations. This chapter describes everyday operations from the printer's control panel, such as loading paper and selecting print features, in detail. After you become more familiar with the printer, use **Quick Reference** at the beginning of the manual to refresh your memory as needed.

Chapter 5, Using Setup Mode, describes how to change the printer's optional settings, such as print features, hardware options, and top-of-form. Most settings only affect print features such as the typestyle and page format. Note that certain settings directly affect hardware and software compatibility. Refer to this chapter as indicated in Chapter 2 or as required.

Chapter 6, Maintenance, explains basic maintenance procedures for this printer.

Chapter 7, Trouble-Shooting, describes problem-solving techniques. Before you contact your dealer for help, check the list of problems and solutions provided in this chapter.

At the end of this manual, you will find several appendixes, a glossary, and an index. Appendix A gives order numbers for printer supplies, options, and publications. Other appendixes provide additional technical information about the printer.

CONVENTIONS

Special information, such as warnings, cautions, and notes, are indicated as follows:

WARNING
A WARNING indicates that personal injury may result if you do not follow a procedure correctly.

CAUTION
A CAUTION indicates that damage to the printer may result if you do not follow a procedure correctly.

NOTE
A NOTE provides "how-to" tips or suggestions to help you perform a procedure correctly. NOTEs are particularly useful for first-time users.

For Experienced Users:
If you are familiar with this printer or with dot matrix printers in general, this information will help you use the manual effectively.

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CHAPTER 4 PRINTING

CHAPTER 5 USING SETUP MODE

QUICK REFERENCE

Quick Reference is written for experienced users —
users who are familiar with how the printer works,
but who may need to refresh their memory
occasionally. *Only the printer's normal (non-setup)
mode is covered*. For details on setup mode, see Chapter 5.

Normal mode operation includes everyday operations, such as paper handling
and font selection. The printer comes up in normal mode when turned on. To
enter setup mode, press the TEAR OFF and ONLINE buttons at the same time
while the ONLINE indicator is off (not lit).
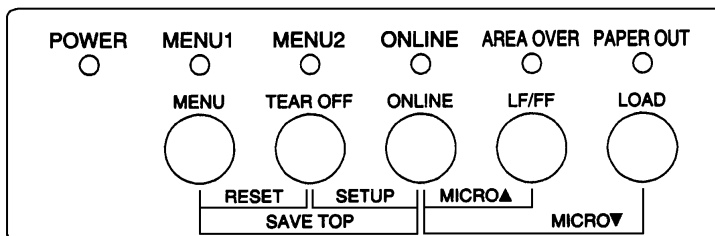
Control panel

The table on the next page lists normal mode opeprations with online
and offline conditions and gives the required user response.
Operations are listed alphabetically.

Printer Operations (Normal Mode)

√   : Operation can be performed when the printer is in this state.
—   : Operation cannot be performed when the printer is in this state.
N/A : Does not apply.

Operation	Online	Offline	Required Response
Clear print buffer	—	√	Press MENU and TEAR OFF.
Eject single sheets	√	√	Press LF/FF.
Enter normal mode	N/A	N/A	Turn printer on. (Press I on the power switch.)
Enter setup mode	—	√	Press TEAR OFF and ONLINE.
Exit to normal mode	—	√	Press ONLINE, then press TEAR OFF or MENU.
Form feed (forward)	√	√	Press and hold LF/FF until the operation starts.
Line feed (forward)	√	√	Press ONLINE and LORD.
Load paper	√	√	Press LOAD.
Micro feed (backward)	—	√	Press ONLINE and TEAR OFF.
Micro feed (forward)	—	√	Press ONLINE and LF/FF.
Place printer offline	√	—	Press ONLINE.
Place printer online	—	√	Press ONLINE.
Reset power-on defaults	√	√	Turn printer off, then on.
Resume printing after paper end	—	√	Press ONLINE.
Save adjusted load positions	—	√	Press ONLINE and MENU.
Select MENU1 or MENU2	—	√	Press MENU.
Start/stop/resume printing	√	√	Start: Send print command. Stop/resume: Press ONLINE.
Self-test printing	√	√	Start: Turn printer off. Press LF/FF while turning printer on. Pause/resume: Press TEAR OFF . Exit: Press ONLINE.
Tear off forms (Continuous forms only)	√	√	Press TEAR OFF. Tear off forms, then press any button to retract forms.
Unload paper to park position (Continuous forms only)	√	√	Press LOAD.

INTRODUCTION

Congratulations on purchasing this printer. This printer is a compact, versatile printer that offers maximum compatibility with today's software packages and personal computers.

The 24-wire print head provides crisp, clear printing for business, office, and home environments. This printer is also easy to install and use.
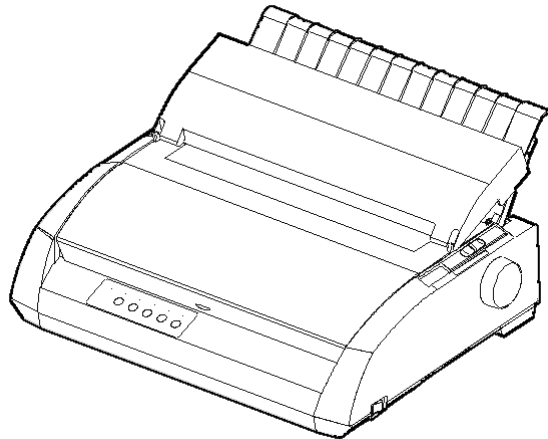
Dot matrix printer

FEATURES

Key printer features and options are listed in the next two sections.

- **Software compatibility**. This printer, which operates primarily with the Fujitsu DPL24C PLUS command set, is compatible with the IBM Proprinter XL24E command set and the Epson ESC/P2 command set.
- **Various character sets.** As basic character sets, IBM PC character sets 1 and 2 are available for the Fujitsu DPL24C PLUS command set and the IBM Proprinter XL24E emulation, and the italic character set and graphics character sets 1 and 2 are available for the Epson ESC/P2 emulation. As national character sets, a total of 57 or 61 national character sets (depending on the emulation), including IBM PS/2 character sets, are available.

- **Multiple fonts.** The printer has nineteen resident fonts: Ten bit-map fonts — Courier 10, Pica 10, Prestige Elite 12, Boldface PS, OCR-B 10, OCR-A 10, Correspondence, Compressed, Draft, and High-speed Draft and nine outline fonts — Timeless, Nimbus Sans, and Courier, each in upright, italic, and bold.

- **High-speed printing**. At 10 cpi, print speed ranges from 113 cpsfor letter quality to 400 cps for high-speed draft quality.

- **Large print buffer**. 128K bytes are available in total for storing input data and downloading fonts. A large input data buffer allows you to send files to the printer and return to work in your application. A large download buffer allows you to use custom fonts.

- **80-column print line**. 80-column printers are best suitable for printing in landscape mode using letter- or A4- size paper.

- **Simple switching of paper types**. The ability to "park" continuous forms makes it easy to switch between continuous forms and single sheets.

- **Auto tearoff**. Continuous forms are fed automatically up to the tear-off position at the end of each job.

- **Maintenance-free**. The printer only requires periodic cleaning and changing of the ribbon cartridge.

SETTING UP

2

Your new printer is easy to install and set up. This chapter tells you how to set up the printer and start printing right away. If this is your first printer, you should read the entire chapter before attempting to use the printer.

In this chapter, you will learn how to:

- Unpack, assemble, and select a good location for the printer
- Identify the printer's major parts
- Connect the power cord and the interface cable
- Test the printer before connecting it to your computer
- Select an emulation and print a sample page using your software
- Installing the printer driver

If you have a problem while setting up the printer, review the section Solving Problems in Chapter 7. If the problem persists, contact your dealer.

SELECTING A GOOD LOCATION

This printer is suitable for most business, office, and home environ-ments. To obtain peak performance from the printer, select a location that meets the following guidelines:

√ Place the printer on a sturdy, level surface.

√ Place the printer near a well-grounded AC power outlet.

√ Ensure easy access to the front and rear of the printer by leaving several inches of space around the printer. Do not block the air vents on the front, left, and right sides of the printer.

√ Do not place the printer in direct sunlight or near heaters.

√ Make sure that the room is well-ventilated and free from excessive dust.

√ Do not expose the printer to extremes of temperature and humidity.

√ Use only the power cord supplied with the printer or recommended by your dealer. Do not use an extension cord.

√ Do not plug the printer into a power outlet that is shared with heavy industrial equipment, such as motors, or appliances, such as copiers or coffee makers. Such equipment often emits electrical noise or causes power degradation.

UNPACKING THE PRINTER Unpack the printer as follows:

1. Open the carton and remove the printer and its components. Make
   sure that you have all of the items shown below. Note that the power
   cord supplied depends on the printer model (100-120 or 220-240 VAC
   power supply).

Ribbon cartridge   Cut sheet stand
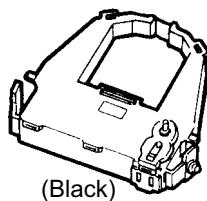
(Black)
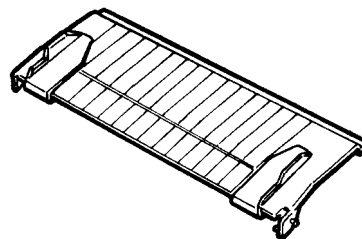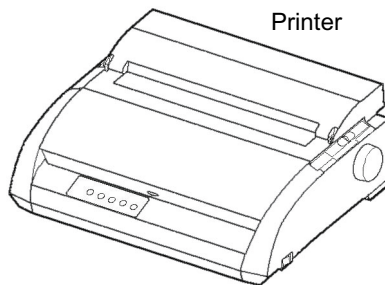
Printer

Power cord   Setup disk

Setting Up
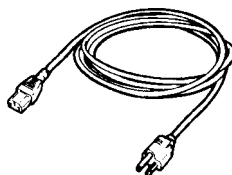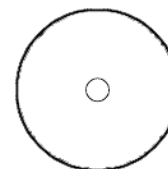
2. Carefully examine each item for damage. Report any problems to your dealer or shipping agent.

3. Place the printer where you plan to use it.

4. Remove the tapes securing the front cover, ejection cover, and back cover. Open the front cover and remove the shipping restraint cardboard that holds the print head carriage in place (shown below).
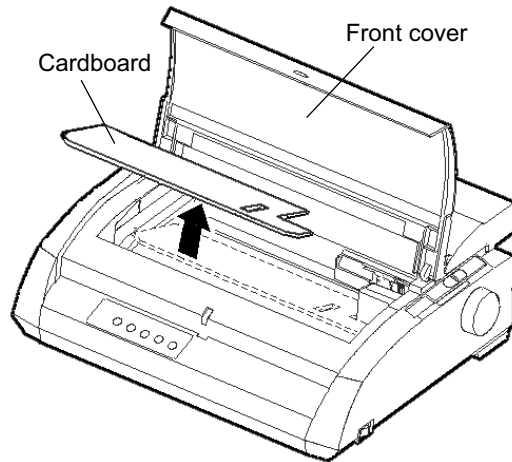
Removing the shipping restraint cardboard

5. Store the original shipping carton and packaging materials for future use. For example, the original packaging is ideal for use when you move or ship your printer to another location.

NOTE
The interface cable is not included with the printer. You must purchase it separately. Connection of the interface cable is described later in this chapter.

Checking Options and Supplies

The following options and supplies, if ordered, are shipped separately:

- Extra monochrome

The RS-232C serial interface is a user-installable option. If you ordered a printer with the interface, the board is already installed in the printer.

Make sure that you received all the options you ordered.

Once you are sure you have everything, you are ready to assemble the printer.

Setting Up

ASSEMBLING THE PRINTER   This section explains how to install the cut sheet stand and ribbon cartridge.

Installing the Cut Sheet Stand

The cut sheet stand enables smooth feeding of both single sheets and continuous forms. Install the cut sheet stand as described below:

1. Referring to the following figure, locate the two grooved notches on the top of the printer, behind the top cover. Note that each notch has a front groove and a rear groove.

2. Locate the two mounting pins on each side of the cut sheet stand.
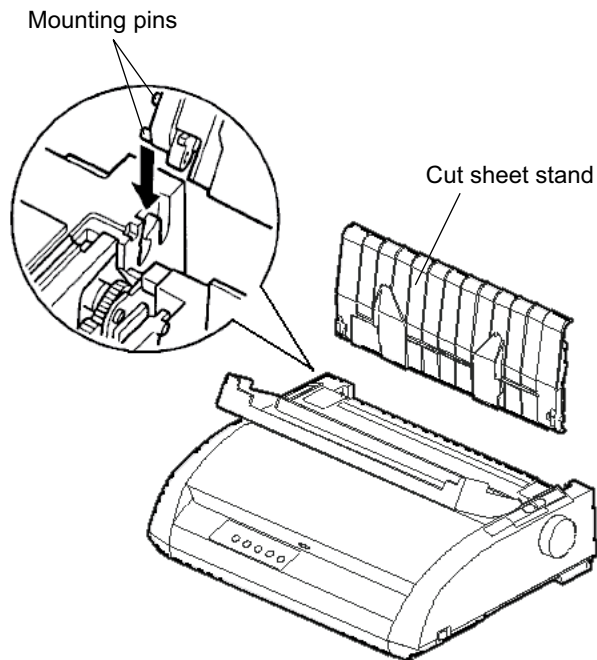
Installing the cut sheet stand

3. Hold the cut sheet stand at an angle over the top of the printer. Slide the mounting pins into the long, front grooves of the notches. This is the cut sheet stand's *up* position, used for printing single sheets.

   To rotate the cut sheet stand to its *down* position, grasp it at the sides and lift it up until the two upper mounting pins fall into the rear grooves of the notches. This position is used for printing most continuous forms.

Installing the Ribbon Cartridge

The printer uses a black ribbon cartridge. To install the ribbon cartridge:

1. Open the front cover of the printer. For easy installation, slide the print head carriage so that it does not face a bail roller.

2. The paper thickness lever, located on the right of the printer, has nine positions. Before you install the ribbon cartridge, move this lever to **D**.

Paper thickness lever

Move to D.
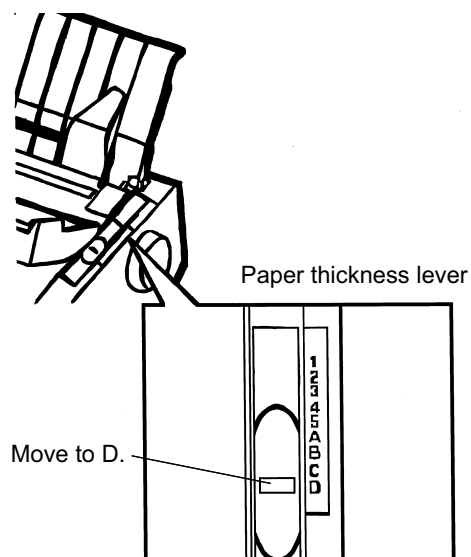
Preparing to install the ribbon

Setting Up

3. Remove the ribbon cartridge from its package and push in the two ribbon release tabs. The tabs snap into the cartridge and the ribbon feed mechanism engages.

Turn the ribbon feed knob clockwise to be sure that it feeds properly.

Ribbon feed knob
Turn clockwise to tighten.

Ribbon release lever

Mounting pin

Ribbon release tabs
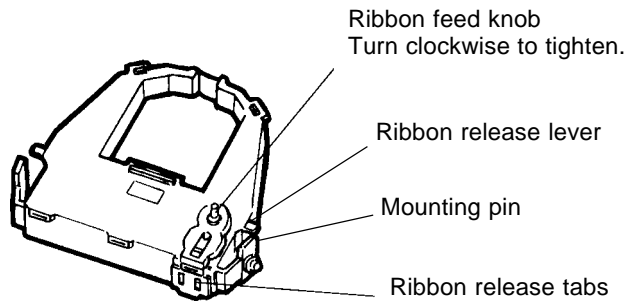
Preparing the ribbon cartridge

4. Locate the two ribbon release levers on either side of the ribbon cartridge. Each ribbon release lever has a mounting pin on the side. As shown below, place the mounting pins on the ribbon support bracket of the head carrier. Insert the ribbon so that the ribbon falls between the nose of the print head and the plastic print guide.

Print head

Print guide

Head carrier
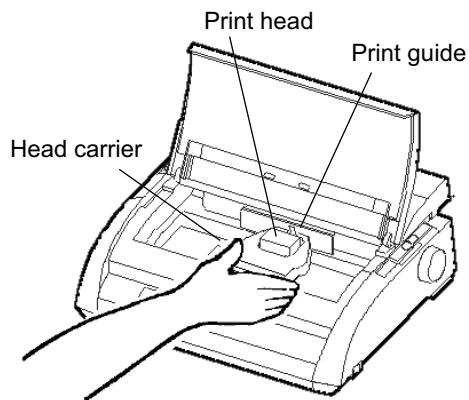
Installing the ribbon cartridge

5. Press the ribbon release levers inward until the mounting pins snap into the holes of the ribbon support brackets. Gently pull on the cartridge to be sure that the pins are secure in the holes.

6. Turn the ribbon feed knob clockwise to take up any slack in the ribbon.

7. Move the paper thickness lever back to position 1, which is the correct setting for printing most single sheets.

8. Close the front cover.

NOTE
A Fujitsu ribbon cartridge is recommended. Dont't use other cartridges. If other cartridges are used, operating problems or damage of print head may be caused.

Setting Up

GETTING ACQUAINTED WITH YOUR PRINTER

Now that your printer is assembled, take a moment to become familiar with its major parts.

Looking at the printer from the front right side, you can see the parts of the printer shown in the figure below.
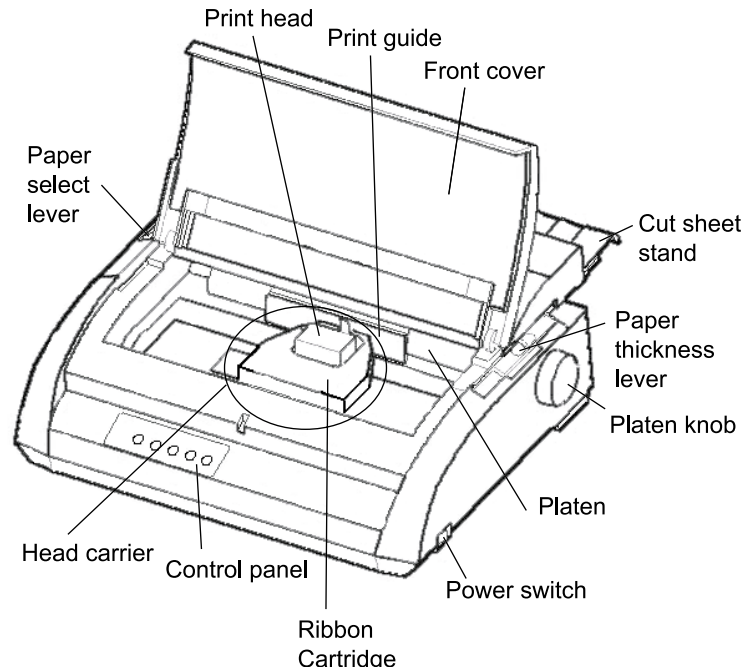
Printer components (front and right)

The printer control panel has the buttons and indicators used to load and feed paper (see Chapter 3) and select print features (see Chapter 4). The control panel also allows you to change the printer's optional settings (see Chapter 5).

Looking at the printer from the back with the cut sheet stand and back cover removed, you can see the following parts of the printer:

Acoustic cover

Interface connector

Power connector

Forms tractors

Paper select lever

Back cover

Setting Up
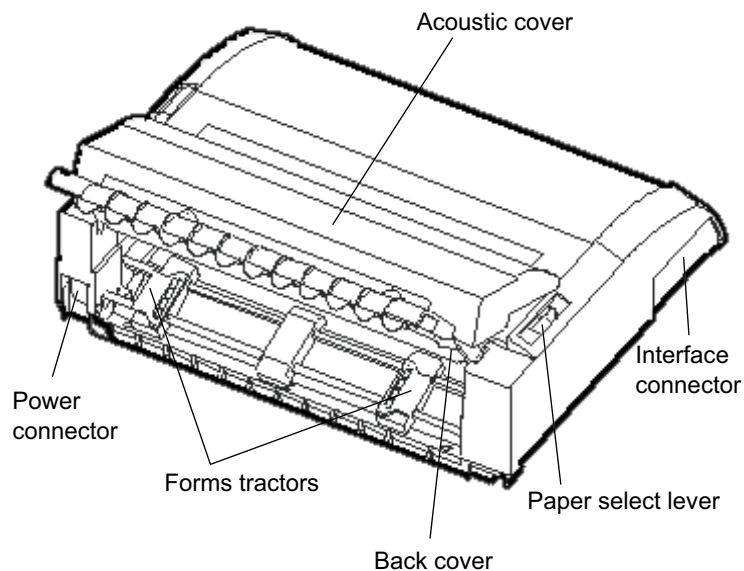
Printer components (rear)

CONNECTING THE POWER CORD

Before you plug in the printer:

√ Make sure that the printer power is switched off. The side marked "1" on the power switch should be raised.

√ Make sure that the power outlet is properly grounded.

√ Make sure that you use the power cord shipped with the printer. This cord is designed to minimize radio frequency interference.

To plug in the power cord:

1. Plug one end of the power cord into the power connector on the rear of the printer.

2. Plug the other end of the power cord into the power outlet.
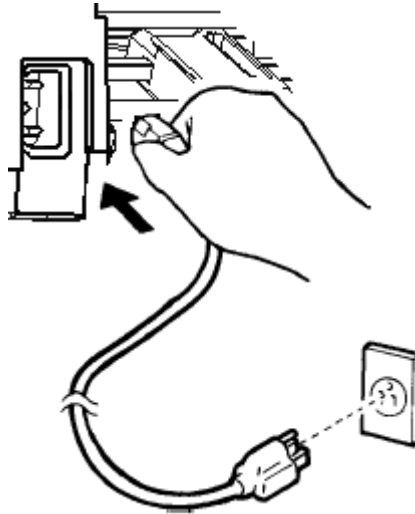
Connecting the power cord

3. Make sure that the power cord is securely connected.

4. Turn on the power by pressing the side marked "1" on the power switch. Within a few seconds, the POWER indicator on the printer control panel will light, the print head will move to its home position, and the ONLINE indicator will light (green).

NOTE
If no forms are loaded, the printer may beep and the red PAPER OUT indicator may light and the ONLINE indicator will not light if the paper select lever is set backward to the continuous forms position. Move the paper select lever forward to the single sheet position (as described in the next section). The PAPER OUT indicator will go out. This condition is a result of the factory default settings and poses no problem.

**TESTING THE PRINTER
(OFFLINE)**

At this point, load paper and run the printer self-test. The self-test checks printer performance and print quality before you connect the printer to the computer. Use either single sheets or continuous forms (see Chapter 3). This section describes the self-test procedure using single sheets.

Loading Paper for the Self-Test

To print the self-test, use paper wider than 215.9 mm (8.5 inches) and set the left paper guide all the way to the right to avoid clipping the test pattern. Standard letter or A4 size paper can be used *lengthwise* (portrait mode).

Before loading paper, make sure that the printer is on. Then, proceed as follows:

1. Make sure that the paper thickness lever (located on the top right of the printer) is at position 1. Make sure that the paper select lever (located on the top left of the printer) is set to the front, as shown below.
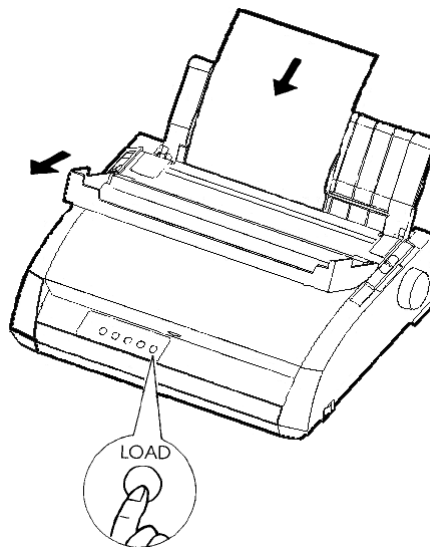
Setting Up

Loading a sheet of paper

2. Raise the cut sheet stand. Move the left paper guide all the way to the right. Insert the sheet of paper into the cut sheet stand. Letter or A4 size paper, inserted *lengthwise* (portrait mode) with this setting, will not result in clipping.

   Adjust the right paper guide so that the paper lies flat on the cut sheet stand.

3. Slide the paper along the cut sheet stand until its bottom edge touches the platen. Then press the LOAD button. The paper will be loaded to the top-of-form position.

Printing the Self-Test

The printer has a built-in self-test program. The self-test prints the firmware version, the names of the printer's resident emulations, and all of the characters available in the emulations. The self-test prints 80 characters per line.

To print a self-test page, make sure that a sheet of paper is loaded. Then proceed as follows:

1. Turn the printer off.

2. While pressing the LF/FF button, turn the printer back on.   Keep the LF/FF button pressed until the printer beeps. Self-test printing will start.
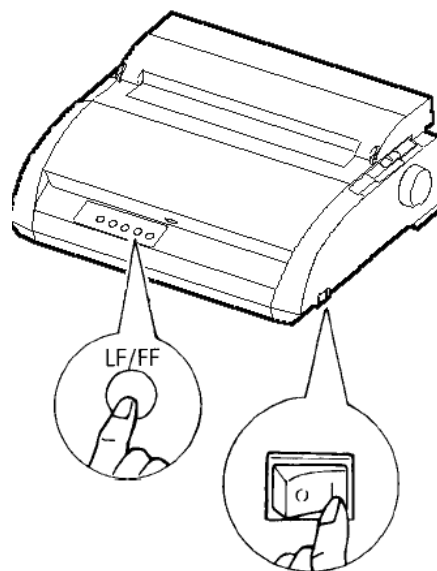
Starting the self-test

3. Allow printing to continue for a dozen or more lines of repeat printing. To stop printing, press the TEAR OFF button. Manually turn the platen knob clockwise to remove the test page.

NOTE
Do not try to use the LF/FF (line feed/form feed) button to eject the paper. In self-test mode, LF/FF cannot be used to feed paper forward.

4. Examine the self-test page. It should look like the sample on the next page.

   Check that printing is uniform and that there are no light, dark, or smudged areas. If the print quality is good, go to step 5. Otherwise, try to correct the problem as follows:

   • Make sure that the ribbon is installed correctly.

   • Make sure that the paper thickness lever is set to position 1.

- Insert a new sheet of paper into the cut sheet stand. Turn the platen knob to manually advance the paper until the top edge has moved past the paper bail rollers.

- Press the TEAR OFF button to restart printing. If the print quality remains poor, turn off the printer and contact your dealer for assistance.

```
BUTTON      ACTION
<ONLINE>    Exit to normal mode
<LF/FF >    Return to <<FUNCTION>> mode
<TEAROFF>   Pause/resume printing


1. Software specification

    KA02008-J101 (01A) 024601

2. Emulations

   DPL24C+  --- FUJITSU DPL24C PLUS      Ver. 2.02
   IBMXL24E --- IBM Proprinter XL24E     Ver. 1.02
   ESC/P-2  --- EPSON ESC/P-2            Ver. 1.02

3. Repeat printing

LOG ; 00 00 00 00 00 00 00

01 00 00 00 00 04 05 00 00 10 00 00 00 00 11 01 00 00 00 00
00 00 00 00 00 01 00 00 00 00 04 05 00 00 10 00 00 00 00 11
01 00 00 00 00 00 00 00 00 00 10 00 30 30 60 00 00 00 00 01
00 01 00 0A 0A 33 43 00 10 10 11 00 00 01 00 00 11 00 00 00
16 16 11 00 00 00 00 00 00 12 00 00 00 00 00 00 01 F5 00
F9 FE FB 00 00 00 00 00 00 00 00 00 00 00 00 F8
00 00 00 00 00 00 00 00 47 62 00 00
```


Sample self-test page

5. To exit the self-test mode, press the ONLINE button. The printer will return online.

NOTE
The printer can also print a special "demo pattern" that illustrates some of the printer's capabilities. To print the demo pattern:

1. **Load a sheet of letter or A4 size paper.**

2. **Turn the printer off .**

3. **While pressing TEAR OFF button, turn the printer back on. The printer will start printing the demo pattern.**

4. **The demo pattern stops printing after one page. To pause or restart the demo during printing of a page, press the ONLINE button.**

5. **To exit demo mode, turn the printer off.**

Setting Up

```
Printing technology:    24 wire dot matrix, Logic seeking
Resolution:             Letter quality  - 360 X 180 dots/inch
                        Draft  quality  - 120 X 180 dots/inch
                        High speed draft - 90 X 180 dots/inch
Standard command set:   Fujitsu DPL24C PLUS Version 2.01
Resident emulations:    Epson ESC/P2, IBM Proprinter XL24E
Character sets:         IBM PC char.sets 1 and 2
                        IBM PS/2 char.sets  (Codepage 437,850,851,
                        852,855,860,863,865,866)
                        ISO8859-1/ECMA 94
                        National character sets  (USA,UK,German,
                        French,Italian,Spanish,Swedish,Finnish,
                        Norwegian,Danish 1 and 2,Hungarian 1 and 2,
                        Slovenia 1 and 2,Mazowia 1 and 2,PG-DHN,
                        Polish 1 and 2,Latin2 1 and 2,Latin P,
                        ISO-Latin,Kamenicky 1 and 2,Turkish 1 and 2,
                        ELOT927,ELOT928,Cyrillic,Lithuanian 1 and 2,
                        Mik,Macedonian,PG-MAC,ABG,ABY,DEC GR,Greek11,
                        HBR-DEC,HBR-OLD,ISO-Turkish,Korean and Legal)
                        691 characters per font
Print functions:        See below.

Fonts - <Bitmap>  Courier 10, Pica 10, Prestige 12, Boldface PS
                  Compression 17, Correspondence 10, Draft 12, HI-Draft 12
                  OCR-B 10, OCR-A 10
        <Scalable> Courier scalable Upright/Italic/Bold
                  Timeless PS Upright/Italic/Bold
                  Nimbus Sans PS Upright/Italic/Bold


Bold printing  Shadow printing  Italic printing  Underline
Condensed  Superscript      Subscript

Double  width  Double height  Double  W  &  H

(The following functions are for the DPL24C PLUS only)

Underline TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6 Overline

Bar code print:  Codabar,EAN8,EAN13,    EAN example:
                 Code 3 of 9,
                 Industrial 2 of 5,
                 Interleaved 2 of 5,
                 Matrix 2 of 5,
                 UPC type A,Code 128
                                        1234 5670

Scalable font + Screened outline:
```

Demo pattern

CONNECTING THE PRINTER TO YOUR COMPUTER

Your printer supports one of the following interface options:

- Centronics parallel interface only
- Centronics parallel interface+RS-232C serial interface
- Centronics parallel interface+USB interface

The RS-232 serial interface is a user-installed add-on option for a Centronics parallel interface model. Installation of the serial option provides a dual interface feature enabling the connection of either interface but inhibiting the operation of both interfaces at the same time.

The parallel interface connector has wire clips. The serial interface connector has tapped holes. Cables for these interfaces are available from dealers, cable manufacturers, and other suppliers. For detailed interface specifications, see Appendix D.

Selecting a Parallel Interface Cable

For the parallel interface, use a cable that meets the following specifications:

- √ At the printer end, use a shielded male Centronics connector, such as an Amphenol DDK 57FE-30360 or its equivalent. To prevent RFI (radio frequency interference), the connector cover must be connected to the cable shield.
- √ At the computer end, most computers (including IBM PCs) require a male DB-25P connector. Some computers, however, require a Centronics connector. To determine the type of connector your computer uses, refer to your computer user manual.
- √ Make sure that the cable length does not exceed 3 meters (10 feet).

Selecting a Serial Interface Cable

For the serial interface, use a cable that meets the following specifications:

- √ At the printer end, use a 25-pin male connector, such as a Cannon DB-25P or its equivalent.
- √ To determine the type of connector your computer requires, refer to your computer user manual or ask your dealer.
- √ The cable length can be up to 15 meters (50 feet). This type of length is required in many networking and shared-printer configurations.
- √ When the USB interface is used to connect to the host computer, the parallel interface and the serial interface (factory add-on option) cannot be connected simultaneously.
- √ The USB interface does not guarantee all connections of USB-supported devices.

Setting Up

Connecting the Interface Cable

To connect the interface cable:

1. Turn off both the printer and the computer.

2. Pull the shutter on the left side of the printer upward as far as it will go.
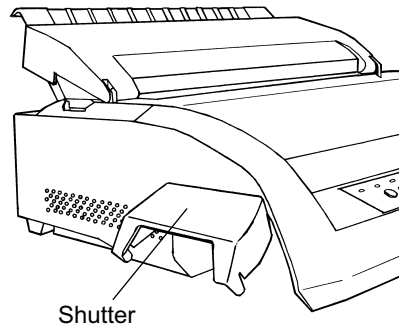
Shutter

Opening the shutter

3. Attach the interface cable to the connector. Centronics connector and RS-232C serial interface can be connected simultaneously. A USB cable, however, cannot be connected to either Centronics connector or RS-232C serial interface simultaneously.
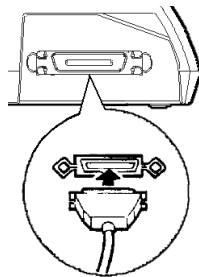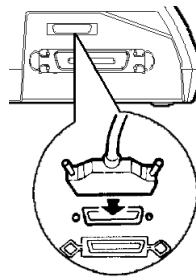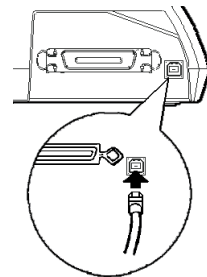
Centronics parallel   Centronics parallel + RS-232C   Centronics parallel + USB

Connecting the interface cable

4. To secure a parallel interface cable, flip the fastener clips located on the printer into the notches on the cable connector. To secure a serial interface cable, tighten the screws in the cable connector.

5. Attach the other end of the interface cable to your computer. Gently pull on the cable to verify that it is secure.

6. Close the shutter.

SELECTING AN EMULATION   Before printing with your software, verify that the correct emulation is selected on your printer. This section describes the available emulations and their selection.

For Experienced Users:

The printer's preselected factory setting is the Fujitsu DPL24C PLUS emulation. If this emulation is acceptable, you may skip this section.

An emulation is a set of commands used by your software to communicate with the printer. There are many different emulations available for printers. Each emulation has unique features and capabilities. This printer offers three resident emulations:

- Fujitsu DPL24C PLUS (for Fujitsu DL-series printers)
- IBM Proprinter XL24E
- Epson ESC/P2

Resident emulations are stored in the printer's permanent memory.

Setting Up

Here are some points to help you determine which emulation to select:

√ Determine which emulations your software supports. (Refer to your software documentation.) Since most software programs support this printer, try to run a program with the factory default emulation first. (DPL24C PLUS emulation is the factory default.) Try this emulation even if you are not sure of which emulation to choose. See Chapter 5 for detailed information about how your printer communicates with your software.

√ If you are using more than one software package, determine which emulation is supported by the software you use most frequently. Select that emulation.

√ If your software supports more than one emulation, select the DPL24C PLUS emulation if possible. This emulation has the greatest capabilities.

√ If you want to use an emulation that is not supported by your software, contact your software manufacturer or printer dealer and ask whether support is available. You may be able to obtain a printer driver that is not shipped with the original software package.

To select an emulation, proceed as follows:

1. Turn the printer on and load a sheet of paper.

To change a single printer setting, such as the emulation, you can use a single sheet paper. To change several printer settings as described in Chapter 5, you must load continuous forms paper. See Chapter 3 for paper loading instructions.

2. Enter setup mode.

Press the ONLINE button to place the printer offline. Then, press the
TEAR OFF button and the ONLINE button.

As the printer enters offline setup mode, it prints the following
information:

```
***  OFFLINE  SETUP  MODE  ***

- Red cursor indicates the option to be selected.
- The selected option is underlined.
- "SAVE&END" function must be selected to exit setup mode.
- Following list shows how buttons function in setup mode:


BUTTON | ACTION on <<FUNCTION>> menu|  ACTION on <ITEM> menu
-------+---------------------------+-------------------------------------------
ONLINE |Reprint <<FUNCTION>> menu  |Select option & return to <<FUNCTION>> menu
 MENU  |Select function            |Select option & print next item
TEAROFF|Select function            |Select option & print previous item
 LOAD  |Move cursor to the right   |Move cursor right to the next option
 LF/FF |Move cursor to the left    |Move cursor left to the previous option
```

        ⌐ <<FUNCTION>> menu

           ⌐Function

```
<<FUNCTION>>
SAVE&END MENU1   MENU2   HARDWRE ADJUST  CONFIG  DEFAULT LIST    SELF-TST HEX-DUMP
V-ALMNT
```
     └ Red cursor on print guide

Initial printout in setup mode

Check that the <<FUNCTION>> menu is printed at the bottom of the
page.

Setting Up

3. Select the MENU1 function.

Locate the red cursor on the plastic print guide. Initially, this cursor
should be positioned under SAVE & END at the beginning of the
<<FUNCTION>> menu. Press the TEAR OFF button repeatedly to
position the red cursor beneath MENU1, as shown below:

```
<<FUNCTION>>
  SAVE&END   MENU1  MENU2    H       ADJUST   CONFIG  DEFAULT  LIST  SELF-TST  HEX-DUMP
  V-ALMNT
```

Press the TEAR OFF button to
position
the red cursor.
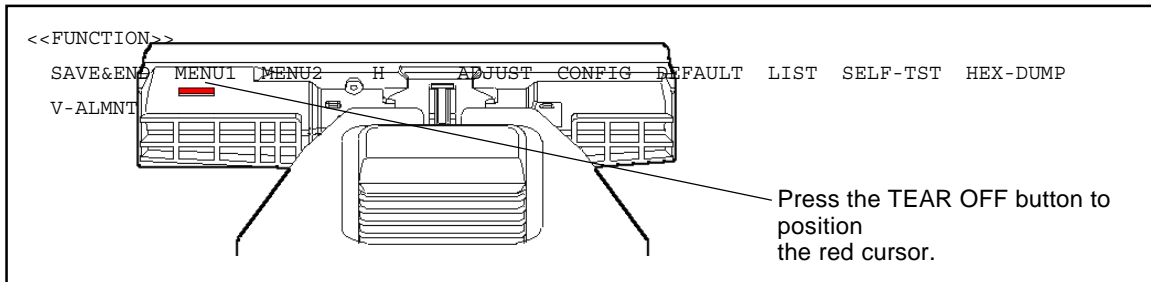
Press the MENU button to select MENU1 and print the following
<EMULATE> options:

```
<EMULATE>      DPL24C+   XL24E    ESC/P2
```
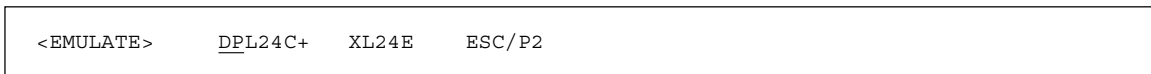
The currently selected emulation is indicated by a short underline. In
the figure shown above, the Fujitsu DPL24C PLUS emulation is
selected.

4. Select an emulation.

Press the TEAR OFF button repeatedly to position the red cursor under
the required emulation. Press the MENU button to select the emulation
and print the next MENU1 item.

5. Exit MENU1.

Press the ONLINE button to exit the MENU1 function and reprint the <<FUNCTION>> menu.

6. Exit setup mode to save the emulation.

To exit setup mode and save the new emulation, make sure that the red cursor is positioned under SAVE & END. Then press the MENU button. The printer selects SAVE & END and then goes online.

To change other printer settings using the printer setup mode, see Chapter 5.

PRINTING A SAMPLE PAGE (ONLINE)

Once the self-test verifies that the printer is functioning correctly, try printing using one of your software packages. This exercise will ensure that the printer is correctly connected to your computer.

If you are using a parallel interface, the printer usually prints the correct characters automatically. However, you may need to adjust the page layout or various print features using your software or the printer setup mode. If you are using a serial interface, the printer may not work at all or it may print a lot of "?" characters. In this case, the serial settings on the printer do not match those of your computer or your software. Before changing any settings, use the procedure described below to try printing using the printer's preselected factory settings.

Test communication between the printer and computer as follows:

1. Load a sheet of paper.

2. Check that the printer is online. If the ONLINE indicator is not green, press the ONLINE button.

3. Try to print using your word processor, a programming language, or other software.

4. Use your software printer selection menus or the printer setup mode (described in Chapter 5) to make required changes in the page layout or other print features.

If the printer does not print or prints the wrong characters, proceed as follows:

• Make sure that the interface cable is properly connected.

• Make sure that the printer emulation selected in your software is the same as that selected on the printer.

• If you are using a serial interface, make sure that the printer serial interface settings are the same as those on the computer. The printer's preselected factory settings are 8 data bits, no parity, 1 stop bit, 9600 baud, and XON/XOFF protocol.

You can change the serial settings on either the printer or your computer. To change the printer settings, see Chapter 5. To change the computer settings, use the selection menus provided by your software or the commands of your computer operating system. The following example uses the MS-DOS operating system:

Using MS-DOS to Specify Serial Interface Settings

For an IBM PC or compatible device, use the following MS-DOS MODE commands to set the computer serial settings to match the printer factory settings:

MODE COM1:9600,N,8,1,P
MODE LPT1:=COM1

To activate these settings whenever you turn the computer on, write the MODE commands in your AUTOEXEC.BAT file. Make sure that the MODE.COM file is included in your root directory.

Setting Up

If the printer still doesn't work, consult your dealer or someone experienced in serial interface communications.

You are now finished setting up and testing the printer. To familiarize yourself with everyday printer operations, such as loading paper, selecting print features, and printing, see Chapters 3 and 4.

INSTALLING THE PRINTER DRIVER

A printer driver is required for using the printer in a Windows environment.
Special printer drivers for Windows 95, 98, Me, NT 4.0, XP, and 2003 are
provided with the DL3750+ printer.
Besides the standard drivers, a high quality driver is provided to enable
printings without dividing barcodes or characters smaller than 24 dots.

For information about how to install printer drivers, refer to Readme.txt of the
printer driver to be installed.

    · These printer drivers run with DLP24C+ emulation. Be sure to specify
      DLP24C+ emulation for the printer mode.

    · The DL3750+ printer driver is a printer driver for monochrome
      printing.
      The color data printing result may differ from its print preview or the
      monochrome data printing result.

```
DL3750+ Driver Disk
 ├ Readme.txt            This file contains an explanation of the program.Read this file first.
 ├ UTILITY               This folder stores the printer utility.
 │  └ Setup.exe          This printer utility setup program installs the status monitor and remote panel.
 └ Drivers               This folder stores the printer drivers.
    ├ DL3750+            This folder stores the printer drivers.
    │  ├ Win95           This folder stores the printer driver for Windows 95.
    │  │  └ Readme.txt   This file contains an explanation of the program.
    │  ├ Win98Me         This folder stores the printer driver for Windows 98/Me.
    │  │  └ Readme.txt   This file contains an explanation of the program.
    │  ├ Winnt40         This folder stores the printer driver for Windows NT 4.0.
    │  │  └ Readme.txt   This file contains an explanation of the program.
    │  ├ Win2kxp         This folder stores the printer driver for Windows 2000/XP.
    │  │  └ Readme.txt   This file contains an explanation of the program.
    │  └ Win2003         This folder stores the printer driver for Windows Server 2003.
    │     └ Readme.txt   This file contains an explanation of the program.
    └ Native             This folder stores the Native printer driver.
       ├ Win9x           This folder stores the printer driver for Windows 95/98/Me.
       │  └ Readme.txt   This file contains an explanation of the program.
       ├ Winnt40         This folder stores the printer driver for Windows NT 4.0.
       │  └ Readme.txt   This file contains an explanation of the program.
       └ Win2k           This folder stores the printer driver for Windows 2000, XP, and 2003.
          └ Readme.txt   This file contains an explanation of the program.
```

3

PAPER HANDLING

This chapter explains how your printer uses paper.
Topics covered are:

- Selecting paper
- Overview of paper operations
- Adjusting for paper thickness
- Using single sheets
- Using continuous forms
- Feeding and positioning paper
- Switching paper types

Tips for paper handling are given at the end of this chapter. Check that section if you are using multipart forms, envelopes, or labels.

SELECTING PAPER

The printer can handle either single sheets or continuous forms. Single sheets, also called cut sheets, include envelopes and noncontinuous, multipart forms. Continuous forms include labels and multipart forms fed into the printer using the forms tractors.

For best results, use paper that meets the specifications listed below. (See Appendix B for detailed specifications.) If you are unsure of the suitability of a particular paper, try testing the paper or consult your dealer.

Length	Single sheets: 76 to 364 mm (3 to 14.3 in) Continuous forms: 102 mm (4 in) or greater
Width	Single sheets: 102 to 267 mm (4 to 10.5 in) Continuous forms: 102 to 267 mm (4 to 10.5 in)
Thickness	0.35 mm (0.014 in) maximum total thickness.
Copies	1 to 5 copies, including the original. For carbon-interleaved paper, the carbon counts as a copy.

Paper
Handling

OVERVIEW OF PAPER OPERATIONS

The following levers and buttons are used in paper handling:

- Paper select lever at the top left corner of the printer
- Paper thickness lever at the top right corner of the printer
- LF/FF, TEAR OFF, LOAD, and MENU buttons on the control panel (A different function is enabled when each button is pressed in conjunction with the ONLINE button.)

The following figure shows the location of each lever and button:
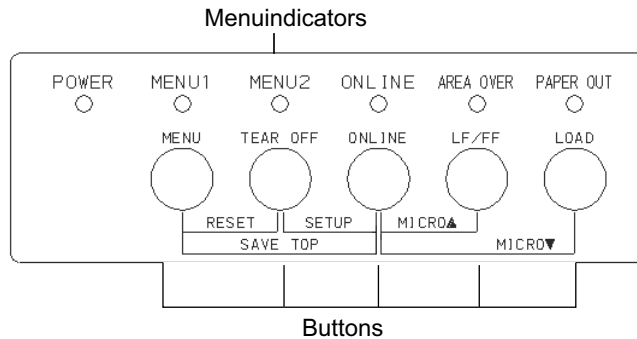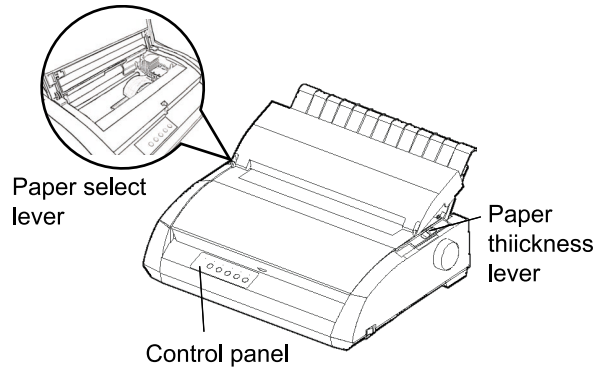
Printer levers and buttons

Table 3.1 summarizes the use of levers and buttons in paper handling. More detailed information is provided later in this chapter.

NOTE

To load or feed paper, the printer must be:

- **Online but not receiving or printing data**
- **Offline but not in setup mode**

To micro-feed paper, which is done with the ONLINE button, the printer must be:

- **Offline but not in setup mode.**

Table 3.1 Levers and Buttons Used for Paper Handling

Lever/Button	Purpose	Action
LF/FF	Form feed	Press and hold LF/FF to execute a form feed. Continuous forms are fed forward by one page. Single sheets are ejected.
	Line feed	Press LF/FF within three seconds to feed paper forward by one line.
	Forward micro feed	Press LF/FF and ONLINE to feed paper forward by 1/180 inch.
TEAR OFF	Advance forms for tear-off	Press TEAR OFF to advance the forms perforation to the tear-off edge. Tear off the forms, then press any button to retract the remaining forms.
LOAD	Load/unload	Press LORD to load paper or to retract continuous forms to the "park position".
	Reverse micro feed	Press LORD and ONLINE to feed paper backward by 1/180 inch.
MENU	Save adjusted load point	Press NEMU and ONLINE to perma-nently store the load position adjusted by micro feeding
Paper select lever *	Select paper path	Move the paper select lever forward for single sheets (cut sheet stand or feeder). Move the paper select lever backward for continuous forms.
Paper thickness lever	Adjust for paper thickness or number of copies	Select the number corresponding to the number of copies (including the original). Vary the setting up or down (including A to D) to optimize printing. Select D when replacing ribbon or clearing a paper jam.

*   **The following graphics are engraved on the cover.**

      : Continuous forms

      : Cut sheets
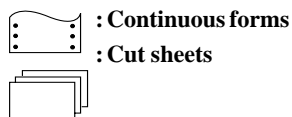
ADJUSTING FOR PAPER THICKNESS

The printer can handle paper of different thicknesses, including multipart forms with up to five parts (original plus four copies). For details on paper thickness specifications, see Appendix B.

The paper thickness lever, located at the top right corner of the printer, allows you to adjust for different paper thicknesses. Be sure to adjust the paper thickness lever whenever you change the number of copies being printed.

The paper thickness lever has nine settings: 1 to 5 and A to D. Use Table 3.2 to determine the appropriate setting for your paper; then, move the paper thickness lever to the appropriate position.

Paper thickness lever

Move to D.
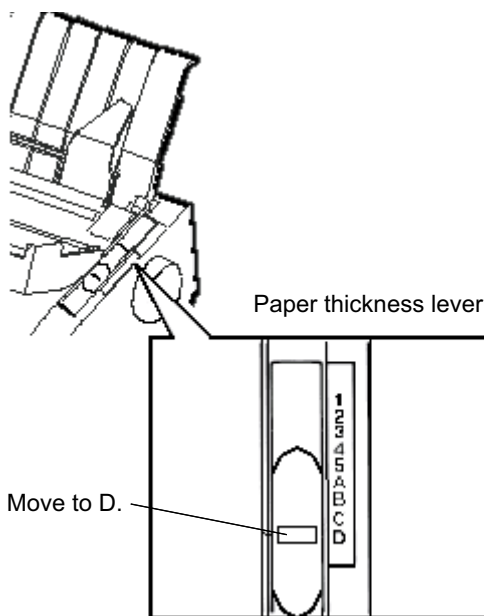
Adjusting the paper thickness lever

Table 3.2 Paper Thickness Lever Settings

Number of Copies (Including the Original) *1	Setting *2
1 copy	1
2 copies	2
3 copies	3
4 copies	4
5 copies	5
Ribbon replacement	D

*1 For carbon-interleaved paper, the carbon counts as one copy.

*2 Vary the setting up or down (including **A** to **D**) to optimize printing.
Select **D** when replacing a ribbon or clearing a paper jam. For labels
and envelopes, use trial-and-error to determine a satisfactory setting.

NOTE
**If printing is messy, the ribbon misfeeds, or the paper jams, move the
lever one setting higher.**

USING SINGLE SHEETS
This section describes how to load paper in the cut sheet stand.
The cut sheet stand allows paper to be loaded manually, one sheet at a time.

Loading a Single Sheet of Paper

To load a sheet of paper into the cut sheet stand:

1. Make sure that the printer is turned on. Check that rear-fed
   continuous forms are retracted to the park position. (For details, see
   the section **Unloading Continuous Forms** later in this chapter.)

Paper
Handling

2. If necessary, reset the paper thickness lever.   (See the section
   Adjusting for Paper Thickness earlier in this chapter.)

3. Move the paper select lever forward. (This lever is at the top left of
   the printer.)

4. Raise the cut sheet stand. Position the left paper guide. Note that its
   movable range is limited.

Adjusting the left margin

Below the left paper guide, the cut sheet stand has a scale graduated in units of
0.1 inch. When the left paper guide is positioned all the way to the right, the
left margin is 5 mm (0.2 inch). To help align paper, also use the two inch-
based rulers on the ejection cover of the printer. The gradations on the ruler
are for 10 columns per inch.
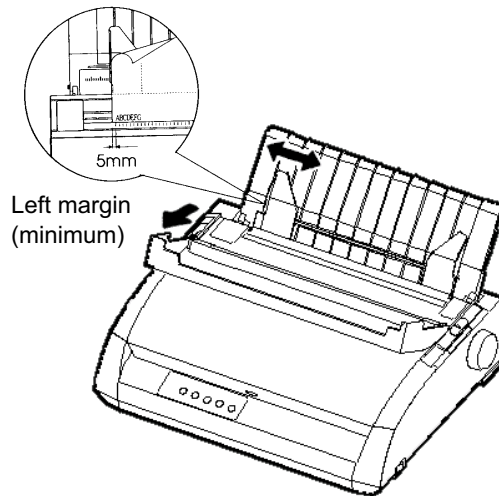
Preparing to load a sheet of paper

5. Insert a sheet of paper into the cut sheet stand. Make sure that the
   bottom edge of the paper engages snugly with the platen. Adjust the
   right paper guide.

6. Press the LOAD button. The paper will advance to the top-of-form position. The top-of-form position is the first line on which printing can start. To adjust the position of the paper slightly, simultaneously press the ONLINE button and the LF/FF button or the LORD button. The paper will move forward or backward in 1/180-inch increments.
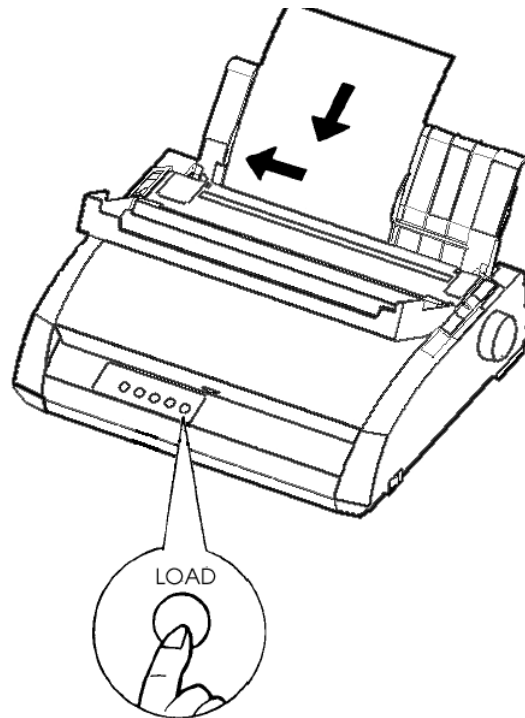
Loading a sheet of paper

7. Place the printer online. Print a sample page and check the page margins. Make the following adjustments, as necessary:

- Horizontal alignment. Readjust the paper guides if required.
- Top-of-form setting (see Chapter 5).
- Margin settings. Use your software or the printer setup mode (see Chapter 5).

Ejecting Single Sheets

If you print using software, each sheet is ejected automatically when the end of the printed page is reached. To manually eject sheets of paper, use either of the following methods:

- Press and hold down the LF/FF button to execute a forward form feed.
- Turn the platen knob clockwise.

USING CONTINUOUS FORMS

Continuous forms paper, fanfolded at the horizontal perforations, is ideal for printing rough drafts and long files. The paper is fed into the printer using the forms tractors. The forms tractors unit at the rear of the printer pushes paper from the rear to the platen. This is called push-tractor feeding.

Positioning the Paper Stack

Place the stack of continuous forms paper directly below the rear of the printer. After the paper is installed in the printer, the paper path should look like this:

Good placement

UP
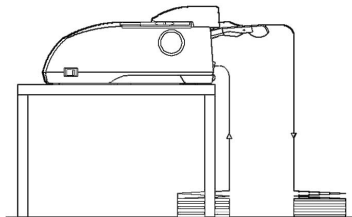
Push-feed, from rear slot
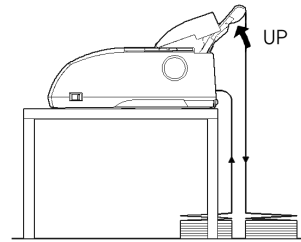
Push-feed, from rear slot with paper-stapled multipart forms
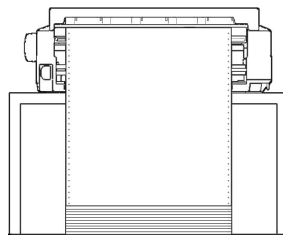
Pull-feed, from bottom slot

Bad placement
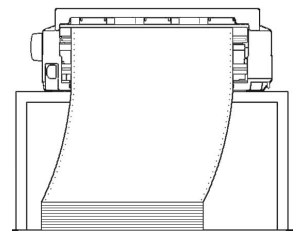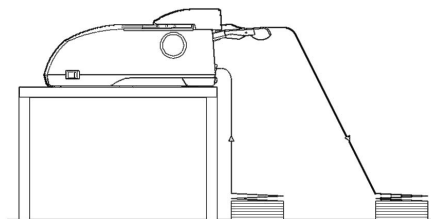
Placement of continuous forms

Paper
Handling

Loading Continuous Forms

This section explains how to use continuous forms. The tractor unit pushes continuous forms.

To load continuous forms paper:

1. Make sure that the printer is turned on. Remove any single- sheet paper from the printer.

2. If necessary, readjust the paper thickness lever for continuous forms. (See the section **Adjusting for Paper Thickness** earlier in this chapter.)

3. Move the paper select lever to the rear of the printer.
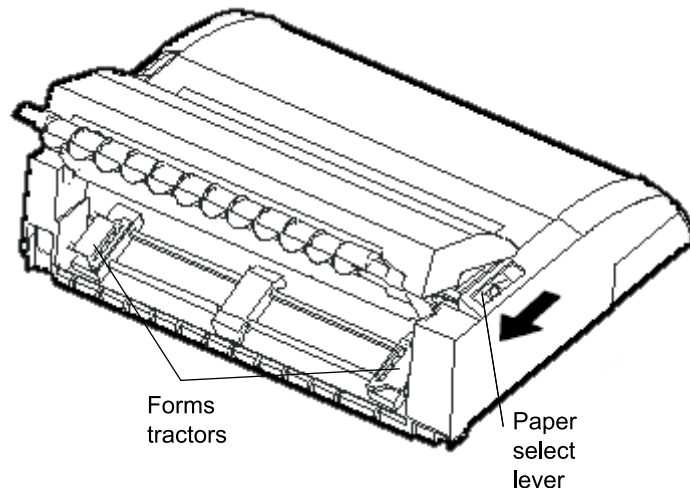
Preparing to load continuous forms paper

4. Release the tractor locking levers by pulling them up. Open the tractor paper holders. See the following figure.

5. Position the right tractor (as seen from the rear of the printer). Push the right locking lever down to secure the tractor. Center the middle forms support.

Paper holders

Locking levers

Tractor guide

12 mm

Left margin
(including perforation area)

Release

Locking lever
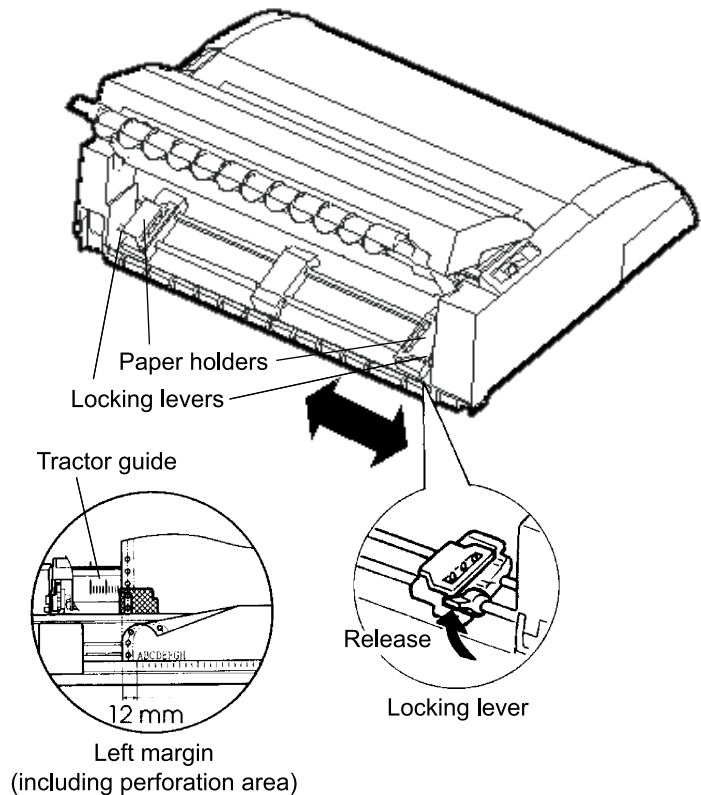
Positioning the tractors

Adjusting the left margin

Below the right tractor, as seen from the back, there is a tractor guide, short inch-based ruler graduated in 10 columns per inch. Use the ruler to help position the tractor. When the paper edge is positioned to the left most line, the left margin is 12mm (0.5 inch) including perforation area.

6. Fit the paper feed holes onto the left and right tractor pins. Adjust the left tractor (as seen from the rear of the printer) to the width of the form. Close the paper holders.

Paper holders
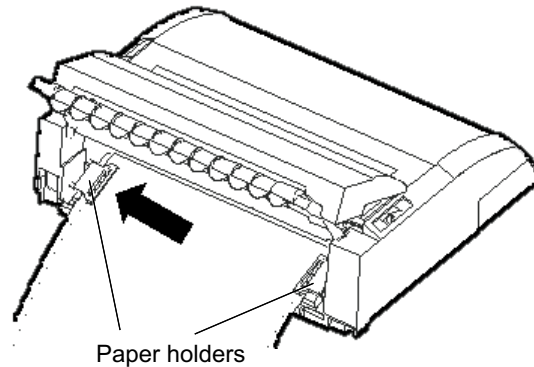
Adjusting paper tension

7. Pull the left tractor (as seen from the rear) to stretch the paper taut. Push the left locking lever down to secure the tractor in place.

8. Install the cut sheet stand. For installation, see the section **Installing the Cut Sheet Stand** in Chapter 2.

9. When using paper-stapled multipart forms, raise the cut sheet stand to the up position. For other continuous forms paper, lower the cut sheet stand to the down position.
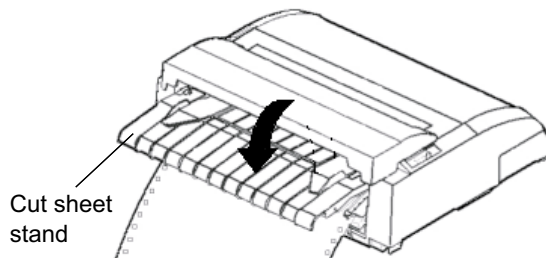
Cut sheet stand

Lowering the cut sheet stand

10. Press the LOAD button to advance the paper to the top-of-form position. Top-of-form is the first line on which printing can start.

11. Press the ONLINE button to place the printer online. Print a sample page and check the page margins. Make the following adjustments, as necessary:

• Horizontal alignment. Move the forms tractors as required.
• Top-of-form setting (see Chapter 5).
• Margin settings. Use your software or the printer setup mode (see Chapter 5).

If the paper cut position and the perforation position do not fit, adjust them by using the following procedure.

Adjusting the TEAR OFF position

When the TEAR OFF button is used to advance the paper to cut it, the paper cut position and the perforation position may not match. In such cases, adjust their positions by using the following procedure.

Adjustment procedure :

1. Use the TEAR OFF button to advance the paper to its cut position. (Keep holding down the TEAR OFF button.)

2. While holding down the TEAR OFF button, adjust the cut position by using the LF/FF button or LOAD button.
   - LF/FF button: Pressing this button once extends the paper feed amount by 1/180 inches.
   - LOAD button: Pressing this button once reduces the paper feed amount by 1/180 inches.
   - The adjustment range is plus or minus 63/180 inches (approximately 9 mm). When it is exceeded, an alarm beeps.

3. When the cut position is adjusted, release the TEAR OFF button. The paper feed amount at the end of the adjustment is stored as the amount by which the paper will be fed when the TEAR OFF button is pressed.

Paper
Handling

Unloading Continuous Forms

> **NOTE**
> **Continuous forms paper that is fed by the pull-tractor cannot be unloaded.**

To unload continuous forms:

1. Make sure that the paper select lever is set to the rear position.

2. Press the LOAD button. The continuous forms paper is retracted to the park position. If the paper cannot be retracted in one operation, continue to press the LOAD button until the paper is parked.

   > **NOTE**
   > **The printer can retract continuous forms paper a maximum of 55.8 cm (22 inches) per operation.**

3. To remove the paper, raise the tractor paper holders and lift out the paper.

Tearing Off Continuous Forms

Your printer has a special "tear-off edge" that allows you to tear off printed pages without wasting paper. The tear-off edge is located on the ejection cover.

To tear off continuous forms using the tear-off edge:

1. Press the TEAR OFF button. The bottom perforation of the last page advances to the tear-off edge. If you specified TEAR OFF: AUTO using the HARDWRE function in setup mode, the paper automatically advances to the tear-off edge at the end of each job (or when the printer has printed all the data received).

NOTE
If the bottom perforation of your paper is not positioned at the tear-off edge, the length of your paper may not be specified correctly in your software or the printer setup mode. Check that the paper length is specified correctly. For information on specifying page length using setup mode, see Chapter 5.

2. Tear the paper off at the perforation.
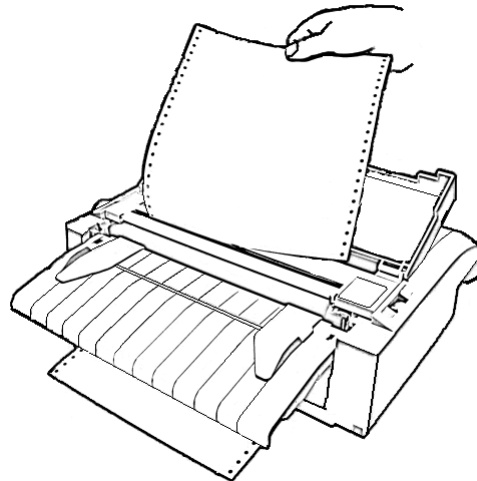
**Paper
Handling**

Tearing off continuous forms

3. Press any button to retract the forms back to the top-of-form position.

**FEEDING AND
POSITIONING PAPER**

Line Feed/Form Feed

Use the line feed/form feed function to move paper forward. This function is valid when the printer is online or offline. Pressing and holding down the LF/FF button feeds one sheet of paper. Pressing the LF/FF button once advances the paper one line (do not hold the button more than three seconds).

The printer does not allow you to execute "reverse" form or line feeds from the control panel. To feed paper backward, manually rotate the platen knob. Remember that the top-of-form will slip from the original setting.

Micro Feed

Use the micro feed function to fine tune the position of the paper. This function is valid when the printer is offline. Press the ONLINE and LF/FF buttons simultaneously to micro-feed paper forward. Press the ONLINE and LOAD buttons simultaneously to micro-feed paper backward.

Remember that the top-of-form will slip from the original setting.

Load Position Adjust

Use also the micro feed function to adjust the load position of the paper. This function is valid when the printer is offline. When this function is used immediately after the LOAD button is pressed, the adjusted position is retained temporarily as the new load position until the power is turned off. Pressing the ONLINE and MENU buttons simultaneously saves the new load position permanently. Load positions are saved separately for single sheets and continuous forms.

SWITCHING PAPER TYPES

If you have more than one type of job, it is often necessary to switch between continuous forms and single sheets. This section explains how to switch between paper types. It is not necessary to remove the continuous forms paper from the printer.

Switching to Single Sheets

To switch from continuous forms to single sheets:

1. Tear off your printed pages.

2. Retract the forms paper to the park position by pressing the LOAD button. The PAPER OUT indicator turns red.

   CAUTION
   Failure to retract the forms paper will cause paper jams.

3. Move the paper select lever forward to the single sheet position.

4. Mount the cut sheet stand. (For details, see the section **Using Single Sheets** earlier in this chapter.) If you are using the cut sheet stand, press the LOAD button to advance the paper to the top-of-form position.

You are now ready to print using single sheets.

Paper Handling

Switching to Continuous Forms

To switch from single sheets to continuous forms:

1. If a sheet of paper is loaded, remove the paper by turning the platen knob or pressing and holding down the LF/FF button.

   CAUTION
   Failure to remove paper may cause a paper jam.

2. Move the paper select lever to the rear to the continuous forms position.

3. Press the LOAD button. The continuous forms paper advances to the top-of-form position.

You are now ready to print using continuous forms paper.

TIPS ON PAPER HANDLING   ### General Tips

- Use high-quality paper. Do not use paper that is wrinkled or curled at the edges.
- Do not use paper with staples or metal parts.
- Do not use paper with unpredictable variations in thickness, such as paper with partial multilayers, paper with embossed printing, and labels with the backing sheet exposed.
- Store paper in a clean, dry environment.

Multipart Forms

- Avoid using carbon-interleaved single sheets if possible. Printing tends to become misaligned on the bottom sheet.
- To ensure smoother feeding of paper-stapled, multipart forms, raise the cut sheet stand to support the forms.

Envelopes

When printing envelopes, use the cut sheet stand or the manual feed slot of the cut sheet feeder. Note the following:

- Set the paper thickness lever to best accommodate envelope thickness.
- When loading envelopes, make sure that the envelope flaps face forward. Otherwise, the envelopes may jam in the printer.

Labels

- Be careful to check operating conditions when using labels.   Labels are sensitive to temperature and humidity.
- Only use labels mounted on continuous forms backing sheets. Do not print labels mounted on single sheet backing. Labels   mounted on single sheet backing tend to slip and printing becomes crooked.
- Set the paper thickness lever to best accommodate label thickness.
- Do not feed labels backwards using the LOAD button from the control panel. Jamming may occur.
- Do not use the printer tear-off feature when printing labels. If the labels are retracted, the backing may peel off and the labels may jam in the printer.
- Do not leave labels loaded in the printer. If labels curl around the platen, jamming may occur when printing is resumed.
- Test-print labels before running a job. If jams occur, set the paper thickness lever to a wider position. If jamming problems continue, try a different type of label.

Paper Handling

4

PRINTING

This chapter describes the following everyday printing operations:

- Selecting print features
- Starting, stopping, or resuming printing
- Removing printed pages
- Clearing the print buffer

Instructions for loading paper are given in Chapter 3.

SELECTING PRINT FEATURES

The print features you select determine how your printed pages will look. Print features include the following:

- Print quality
- Fonts
- Pitch (characters per horizontal inch)
- Page length and width
- Line spacing (lines per vertical inch)

To select print features, you can use either commercial software or the printer control panel. The method you use depends on the capabilities of your software. If your software has most of the features you require, you may rarely – if ever – have to use the control panel. *In fact, your software often overrides the printer settings*.

If your software has limited options, you can use the printer control panel to select print features. Sometimes, the control panel enables you to select features not available through your software. For example, you can select downloaded fonts not supported by your software.

Printing

Using Commercial Software

Many commercial software packages offer a wide variety of print features, including some features that are not supported by this printer. For example, software often provides a wider range of font sizes than the printer can accommodate. Software also allows you to specify multiple fonts on a page. To determine which features your software supports and how to select them, refer to your software documentation.

Using the Control Panel

Use the MENU button to directly select one of the two menus.
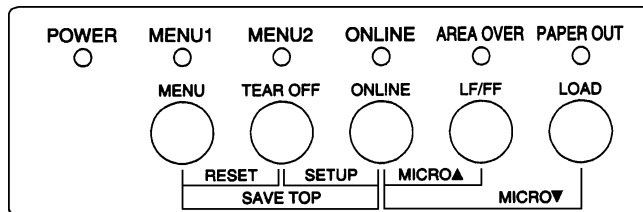
Printer control panel

The MENU button specifies MENU1 or MENU2, either of which allows you to specify different sets of options in advance. Some of the print features include emulation, print quality, character pitch, and line spacing.

When you first turn the printer on, the MENU 1 indicator is lit; that is, all of the print features assigned to MENU1 are enabled. However, you can easily switch to MENU2 before printing. You can also select a resident font other than the fonts assigned to MENU1 and MENU2.

NOTE
For easy reference, keep a list of your current MENU 1 and MENU 2 settings near the printer. To print a list of current settings, see the section Printing a List of Selected Options in Chapter 5. You may also want to use the space provided in Table 4.1 to record your settings.

Selecting MENU1 or MENU2

When you first turn the printer on, MENU1 is selected. To change to MENU2
or back to MENU1, proceed as follows:

1. Press the ONLINE button to place the printer offline.

2. Repeatedly press the MENU button. The lighted indicator (1 or 2)
    shows the menu selected. When the menu selection is changed, the
    font (font, pitch, and quality) assigned in the selected menu becomes
    valid.
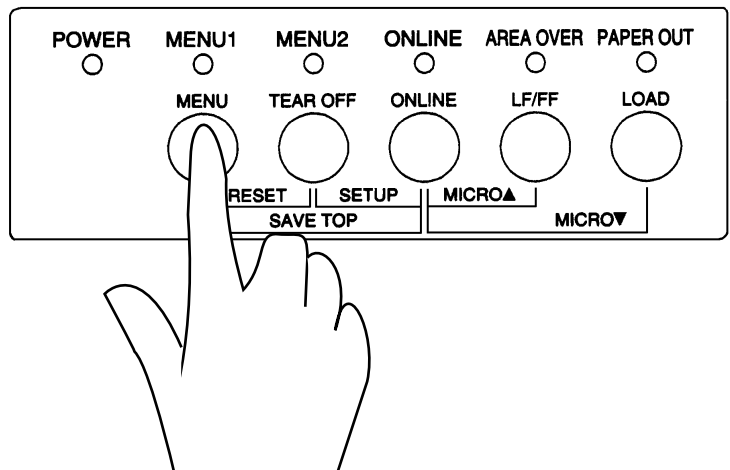
Table 4.1 MENU1 and MENU2 Settings

Setting	Default Settings *For easy reference, check (š) or record your default settings in the space below.*	
Print Feature	**MENU1**	**MENU2**
Emulation Fujitsu DPL24C PLUS IBM Proprinter XL24E Epson ESC/P2		
Font Courier 10 Prestige Elite 12 Compressed 17 Boldface PS Pica 10 Correspondence OCR-B 10 OCR-A 10 Courier Normal 10 (outline) Courier Bold 10 (outline) Courier Italic 10 (outline) Nimbus Sans Normal PS (outline) Nimbus Sans Bold PS (outline) Nimbus Sans Italic PS (outline) Timeless Normal PS (outline) Timeless Bold PS (outline) Timeless Italic PS (outline) Downloaded font 0 Downloaded font 1		
Print quality Letter Report Draft High-speed draft		
Pitch 2.5, 3, 5, 6, 10, 12 15, 17, 18 or 20 cpi Proportional spacing		
Other features:		

3. Press the ONLINE button to return online. You are ready to print using the selected menu.

STARTING OR STOPPING PRINTING

Starting Printing

Before you start to print, make sure that paper is loaded. Also, verify that the paper thickness lever is set to the appropriate position (**1** to **D**).

To start printing, press the ONLINE button to place the printer online. Then start your software.

Stopping Printing

To stop printing immediately, press the ONLINE button to place the printer offline. You can also use your software to stop printing, but there will be a slight delay before printing stops. Any data sent to the print buffer but not yet printed is stored until you resume printing. Data in the print buffer is lost if you turn the printer off.

To resume printing, press the ONLINE button again. To cancel printing, use the cancel commands provided by your software or computer. To clear the print buffer, place the printer offline and press the MENU and TEAR OFF buttons. Any data sent to the print buffer before you canceled printing will be lost.

Resuming from a Paper-Out

The printer can "sense" when paper runs out. Depending upon how PPR-OUT (paper-out) is set in setup mode, the printer either:

- Stops printing and lights the red PAPER OUT indicator, or
- Continues printing until no more data remains in the printer.

See Chapter 5 for details on setting PPR-OUT. The factory default is to stop printing if continuous forms paper runs out and to continue printing if single sheet paper runs out.

To resume printing when paper runs out, use either of the methods described below:

Printing

Printing the remaining lines on a page

This method is convenient to continue printing under the paper-out condition.

1. Press the ONLINE button. The printer returns to online mode, prints or feeds one line, and the PAPER OUT indicator lights up again.

2. Repeat this procedure until the full page is printed. Line spacings, however, may be uneven.

CAUTION
When using the cut sheet stand or when printing remaining lines, be careful not to print on the platen. Printing on the platen may damage both the platen and the print head.

Continuing printing after supplying paper

1. Install paper on the forms tractors, or on the cut sheet stand.

2. To load the first sheet of paper, press the LOAD button. The PAPER OUT indicator will turn off.

3. Press the ONLINE button to place the printer online. The printer resumes printing.

   NOTE
   For continuous forms paper, the page where printing stopped and the page where printing resumes may be incorrectly printed. In this case, wait for the entire job to finish printing. Then reprint the incorrect pages.

Resuming from an Area Over

The printer senses the left and right edges of paper and stores their positions when the paper is loaded. If your software will print data past either edge, the printer ignores that data but does not stop printing. Rather, the AREA OVER indicator lights to call your attention to the loss of data.

The AREA OVER indicator functions when AREACNT (area control) is set to ENABLE in setup mode. See Chapter 5 for information on setting AREACNT. The factory default is not to sense the edges. If paper is dark-colored or preprinted, the printer may not be able to sense the edges correctly. In this case, disable the sensor.

To resume printing when the AREA OVER indicator is on:

1. Stop your software and press the ONLINE button to place the printer offline.

2. Adjust the horizontal position of the paper or change the margin settings in the printer setup menu or your software.

3. Press the ONLINE button to place the printer online. Restart the software from the page that includes the lost data.

Printing

REMOVING PRINTED PAGES

This section describes the best methods for removing single sheets or continuous forms paper after printing.

Removing Single Sheets

When you print using software, the printer automatically ejects each sheet of paper when the end of the printed page is reached. To eject sheets manually, use one of the following methods:

- Press and hold down the LF/FF button to execute a form feed, or
- Turn the platen knob clockwise.

Removing Continuous Forms

To avoid wasting paper, use the printer tear-off function to remove continuous forms paper. Press the TEAR OFF button to advance the perforation to the tear-off edge. Tear the paper off, and then press any button to retract the paper back to the top-of-form position. See Chapter 3 for more detailed instructions.

CLEARING THE PRINT BUFFER

Press the MENU and TEAR OFF buttons simultaneously to clear all data from the print buffer. This method is useful when you cancel a print operation and do not want to continue printing data already sent to the printer.

This method does not change or clear MENU1 and MENU2 settings, paper loading position settings, and downloaded fonts.

USING SETUP MODE

5

Your printer has two modes: normal and setup. *Normal mode* is used for everyday printer operations and is explained in Chapters 3 and 4.

Setup mode serves two purposes. It enables you to:

- Select the printer's optional settings
- Help diagnose printer problems

These setup mode functions can be done either offline, using the printer control panel (offline setup), or remotely, using a setup program in your computer system or software (online setup). Primarily, this chapter explains how to use the offline setup mode. The online setup mode, which is reviewed briefly at the end of this chapter, is valid in all emulations. For details, refer to the programmer's manuals.

Optional settings on the printer include the emulation, fonts, pitch, page length and page width, serial interface options, and the top-of-form setting. When you save your settings in the printer's permanent memory, they become the new settings or defaults. These defaults are invoked whenever you turn on the printer. For example, if you save DPL24C PLUS as the default emulation, DPL24C PLUS is invoked when you turn on the printer.

The printer diagnostic functions are SELF-TST, HEX-DUMP, and V-ALMNT. These functions are helpful for printer trouble-shooting, as described in Chapter 7.

HOW TO USE THIS CHAPTER

The sections in this chapter are presented in logical sequence. *If you are a first-time user,* be sure to read the following sections *first:*

- Entering Setup Mode
- Overview of Setup Mode

These sections will familiarize you with how setup mode works. Once you understand the basics, use the following sections to select printer options that are compatible with your computer system's hardware and software setup:

- Printing a List of Selected Options
- Deciding Which Options to Change
- Changing MENU1 and MENU2 Options
- Changing Hardware Options
- Changing Print Position Adjustment Options
- Changing Configuration Options
- Exiting and Saving

To restore the printer default settings (factory defaults or power-on defaults), see the section **Resetting Defaults** later in this chapter.

For information on using the SELF-TST, HEX-DUMP, and V-ALMNT functions, see the section **Using the Diagnostic Functions** later in this chapter.

For Experienced Users:
Once you are familiar with setup mode, you may want to use the flowchart at the end of this chapter for quick reference. The flowchart lists all printer setup functions, items, and options.

ENTERING SETUP MODE
Before entering setup mode, load continuous forms paper into the printer as described in Chapter 3. Several sheets of paper may be required to make all of your setup mode selections.

To enter setup mode, follow these steps:

1. Make sure that continuous forms paper is loaded and that the paper select lever is set backward.

2. Press the ONLINE button to place the printer offline.

3. Press the TEAR OFF and ONLINE buttons simultaneously until the printer beeps.
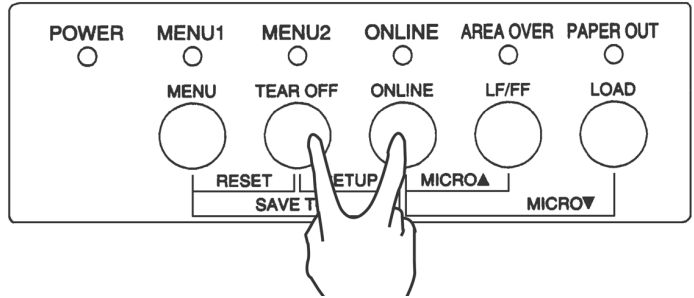
Entering setup mode

If you do not hear a beep or hear an alarm beep (beeps four times), you are not in setup mode. Place the printer offline and try again.

4. When the printer enters offline setup mode, it prints the following information.


```
***  OFFLINE  SETUP  MODE  ***

- Red cursor indicates the option to be selected.
- The selected option is underlined.
- "SAVE&END" function must be selected to exit setup mode.
- Following list shows how buttons function in setup mode:


BUTTON| ACTION on <<FUNCTION>> menu|  ACTION on <ITEM> menu
------+----------------------------+------------------------------------------
ONLINE|Reprint <<FUNCTION>> menu   |Select option & return to <<FUNCTION>> menu
 FONT |Select function             |Select option & print next item
 MENU |Select function             |Select option & print previous item
 LOCK |Move cursor to next function|Move cursor to next option
```

<<FUNCTION>> menu

Function

```
<<FUNCTION>>
SAVE&END MENU1   MENU2   HARDWRE ADJUST  CONFIG  DEFAULT LIST    SELF-TST HEX-DUMP
V-ALMNT
```

Red cursor on print guide

Initial printout in setup mode

Setup Mode

The initial printout contains a header, help menu, and <<FUNCTION>> menu. The header tells you that the printer is offline and in setup mode. The help menu provides a quick summary of how to use setup mode. The <<FUNCTION>> menu lists all of the functions available to you in setup mode. Note that the red cursor on the plastic print guide is initially positioned below the SAVE & END function.

Setup mode can also be entered by turning off the printer, then turning the printer back on while pressing the TEAR OFF and ONLINE buttons simultaneously until the printer beeps.

OVERVIEW OF SETUP MODE

When you enter setup mode, the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST  SELF-TST  HEX-DUMP
  V-ALMNT
```

Table 5.1 summarizes the purpose of each function.

Table 5.1 Setup Mode Functions

Type	Function	Purpose
Select Function	SAVE & END	Exits setup mode and saves any changes made while in setup mode.
	MENU1 and MENU2	Assigns print features to MENU1 and MENU2 on the printer control panel.
	HARDWRE	Changes the printer hardware options.
	ADJUST	Changes the print position adjustment options.
	CONFIG	Changes the configuration options.

Table 5.1 Setup Mode Functions (Cont.)

Type	Function	Purpose
Select Sub Function	SAVE & END	Exits setup mode and saves any changes made while in setup mode.
	DEFAULT	Resets factory defaults in MENU1 and MENU2.
	LIST	Prints a list of all currently selected options.
Self Diagnostic Function	SELF-TST	Runs the self-test.
	HEX-DUMP	Prints hex dumps.
	V-ALMNT	Checks and corrects vertical print alignment.

To select a function from the <<FUNCTION>> menu:

1. Repeatedly press the LOAD button or the LF/FF button to position the red cursor on the plastic print guide under the function you require. The LOAD button moves the cursor to the next option and the LF/FF button moves the cursor to the previous option.

2. Press the TEAR OFF button or the MENU button to select the function. If the function has items and options, the printer prints the first item and its options. The MENU1, MENU2, HARDWRE, ADJUST, and CONFIG functions contain items that have selectable options. The other functions have neither items nor options.

The first three MENU1 items and their options are shown below. Items are enclosed in single brackets < >.

```
<EMULATE>          DPL24C+  XL24E    ESC/P2


<FONT>
 COUR 10  PRSTG12  COMPRSD  BOLDFCE  PICA 10  CORRESP  OCR-B    OCR-A    COUR-N   COUR-B
 COUR-I   N.SAN-N  N.SAN-B  N.SAN-I  TIMLS-N  TIMLS-B  TIMLS-I  DOWNLD0  DOWNLD1


<QUALITY>          LETTER   REPORT   DRAFT    HI-DRAFT
```

Setup Mode

To select an option from the <item> menu:

1. Repeatedly press the LOAD button or the LF/FF button to position the red cursor on the plastic print guide under the option you require.
2. Press the MENU button to select the option. The printer prints the next item and its options. You can press TEAR OFF to select the option. Then, the printer prints the previous item and its options.
3. After selecting the desired options, press the ONLINE button to reprint the <<FUNCTION>> menu.

   For each item, the short-underlined option is the current default option (the option currently saved in the printer's permanent memory). In the previous example, the default options are Fujitsu DPL24C PLUS emulation, Courier 10 font, and letter print quality.

The chart on the next page summarizes how to select options such as emulation, font, and print quality and how to use functions that do not have options.

Setup Mode Example

To become familiar with setup mode, try the following example. This example shows how to change the font and pitch in MENU2 to Prestige Elite 12 and 12 cpi.

1. **Load continuous forms paper.**
2. **Enter setup mode.**
   Press the TEAR OFF and ONLINE buttons simultaneously until the printer beeps.
3. **Select the MENU2 function.**
   Wait for the printer to stop printing and press the LOAD button or the LF/FF button twice to position the red cursor on the print guide under MENU2. Press the TEAR OFF button or the MENU button to select the MENU2 function and print the <EMULATE> item and its options.

Enter setup mode:
Press TEAR OFF and ONLINE

Reprint <<FUNCTION>> menu

Printer prints<<FUNCTION>>menu

Select function: Press LOAD or LF/FF to position the cursor, then press TEAR OFF or MENU

Desired function is selected

Press TEAR OFF or MENU

SAVE&END

Printer saves changes and exits setup mode

MENU1,MENU2,HARDWRE, ADJUST, and CONFIG

Select options: Press LOAD or LF/FF to position cursor, then press TEAR OFF or MENU

Press ONLINE

LIST, DEFAULT

Press ONLINE

SELF-TST, HEX-DUMP

Press TEAR OFF to pause/resume

Press LF/FF

V-ALMNT

See **Checking Vertical Print Alignment (V-ALMT)** later in this chapter for details.

▨ : Functions having items and options

Summary of setup mode

Setup Mode

4. **Select the current emulation.**

Since you do not want to change the emulation, press the MENU button to select the current emulation and print the next item, <FONT> and its options.

5. **Change the font to Prestige Elite 12.**

Press the LOAD button or the LF/FF button once to position the cursor beneath PRSTG12. Press the MENU button to select PRSTG12 and print the next item, <QUALITY>, and its options.

6. **Select the current print quality.**

Since you do not want to change the print quality, press the MENU button to select the current print quality and print the next item, <PITCH>, and its options.

7. **Change the pitch to 12 cpi and exit the MENU2 function.**

Press the LOAD button or the LF/FF button once to position the cursor under 12 CPI. Since you do not want to make any other changes in MENU2, press the ONLINE button to select 12 CPI and exit MENU2. The <<FUNCTION>> menu is then reprinted.

8. **Exit setup mode, saving the new font and pitch.**

Since the cursor is under SAVE & END, press the MENU button or the TEAR OFF button to select SAVE & END. The printer saves Prestige Elite 12 and 12 cpi as the new power-on defaults in MENU2. The printer then exits setup mode and returns online. These settings remain in effect until changed.

Points to Remember

- Load continuous forms paper *before entering setup mode*. In setup mode, the LF/FF button cannot be used to feed paper. To adjust the line position of paper in setup mode, use the platen knob.

- Whenever you enter setup mode, short help menus are printed at the top of the page. Help menus are also printed when you select the SELF-TST, HEX-DUMP, or V-ALMNT functions. Use help menus for quick reference while in setup mode.

- When printing the items and options for each function, you can only print one item at a time. However, you can move either forward or backward in the item list. To move forward (print the next item), press the MENU button. To move backward (print the previous item), press the TEAR OFF button.

- While in the <<FUNCTION>> menu or when selecting a function that contains items and selectable options, press the ONLINE button to reprint the <<FUNCTION>> menu.

- A short underline under the first two letters of an option indicates that it is the current default setting. For example, <u>12</u> CPI indicates that 12 characters per inch is the default pitch.
  To change the default, select and save a new pitch setting.

- While in setup mode, you can use the LIST function to print out a list of the currently selected options (see the next section for details).

- To exit setup mode and permanently save your changes, select either the SAVE & END function. For details, see the section **Exiting and Saving** later in this chapter. To exit setup mode without saving your changes, turn the printer off. Your previous power-on defaults are active when you turn the printer on again.

Setup Mode

PRINTING A LIST OF SELECTED OPTIONS

The LIST function prints a list of all the printer's currently selected options. This function is useful for checking the printer settings when you first enter setup mode or just before you exit. To print a list of options, load continuous forms paper and then proceed as follows:

1. **Enter setup mode.**
   Press the TEAR OFF button and the ONLINE button simultaneously until the printer beeps. Wait for the printer to stop printing and check that the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END   MENU1   MENU2   HARDWRE   ADJUST   CONFIG   DEFAULT   LIST   SELF-TST   HEX-DUMP
  V-ALMNT
```

2. **Select the LIST function.**
   Repeatedly press the LOAD button or the LF/FF button to position the red cursor under LIST. Next press the TEAR OFF button or the MENU button to select the LIST function. The printer starts to print a list of the currently selected options. The preselected factory settings, also called factory defaults, are shown on the opposite page.
   When the printer finishes printing the list of options, it reprints the <<FUNCTION>> menu.
   NOTE
   To remove the printout, turn the platen knob until the paper can be torn off at the perforation. In setup mode, you cannot use the printer tear-off feature (TEAR OFF button).

3. **Do either of the following:**
   - Select another function, or
   - Exit setup mode, saving any changes you made.

   For details about other functions, see the other sections in this chapter. To exit setup mode and save your changes, make sure that the red cursor is positioned beneath SAVE & END, then press the MENU button or the TEAR OFF button.

```
<< Menu 1 settings >>                    << Menu 2 settings >>
- - - - - - - - - - - - - - - - - -      - - - - - - - - - - - - - - - - - -
Func.   |Item   |Option                  Func.   |Item   |Option
- - - - - - - - - - - - - - - - - -      - - - - - - - - - - - - - - - - - -
MENU1   |EMULATE|DPL24C+                 MENU2   |EMULATE|DPL24C+
MENU1   |FONT   |COUR 10                 MENU2   |FONT   |COUR 10
MENU1   |QUALITY|LETTER                  MENU2   |QUALITY|LETTER
MENU1   |PITCH  |10 CPI                  MENU2   |PITCH  |10 CPI
MENU1   |LINE SP|6 LPI                   MENU2   |LINE SP|6 LPI
MENU1   |CHAR-W |NORMAL                  MENU2   |CHAR-W |NORMAL
MENU1   |CHAR-H |NORMAL                  MENU2   |CHAR-H |NORMAL
MENU1   |ATTRIB |NONE                    MENU2   |ATTRIB |NONE
MENU1   |PAGE LG|11.0 IN                 MENU2   |PAGE LG|11.0 IN
MENU1   |LFT-END|1  COLM                 MENU2   |LFT-END|1  COLM
MENU1   |TOP-MRG|1  LINE                 MENU2   |TOP-MRG|1  LINE
MENU1   |LANGUGE|PAGE437                 MENU2   |LANGUGE|PAGE437
MENU1   |CHR-SET|SET2                    MENU2   |CHR-SET|SET2
MENU1   |PRF-SKP|NO-SKIP                 MENU2   |PRF-SKP|NO-SKIP
MENU1   |ZEROFNT|NO-SLSH                 MENU2   |ZEROFNT|NO-SLSH
MENU1   |DC3-CDE|ENABLE                  MENU2   |DC3-CDE|ENABLE
MENU1   |CR-CODE|CR ONLY                 MENU2   |CR-CODE|CR ONLY
MENU1   |LF-CODE|LF & CR                 MENU2   |LF-CODE|LF & CR
MENU1   |RGHTEND|WRAP                    MENU2   |RGHTEND|WRAP
MENU1   |==END==|                        MENU2   |==END==|
- - - - - - - - - - - - - - - - - -      - - - - - - - - - - - - - - - - - -

<< Hardware settings >>                  << Adjust settings >>
- - - - - - - - - - - - - - - - - -      - - - - - - - - - - - - - - - - - -
Func.   |Item   |Option                  Func.   |Item   |Option
- - - - - - - - - - - - - - - - - -      - - - - - - - - - - - - - - - - - -
HARDWRE |PPR-OUT|DETECT                  ADJUST  |CNT-ORG|1.8/6IN
HARDWRE |PRT-DIR|BI-DIR                  ADJUST  |CNTFINE|0 /180
HARDWRE |BUZZER |ON                      ADJUST  |CUT-ORG|1.8/6IN
HARDWRE |WORD-LG|8 BIT                   ADJUST  |CUTFINE|0 /180
HARDWRE |BUFFER | 8KBYTE                 ADJUST  |CNT-LFT|0  /90
HARDWRE |INTRFCE|AUTO-2S                 ADJUST  |CUT-LFT|0  /90
HARDWRE |==END==|                        ADJUST  |CUT-ADJ|0  /360
- - - - - - - - - - - - - - - - - -      ADJUST  |CNT-ADJ|0  /360
                                         ADJUST  |CNTADJL|0  /360
                                         ADJUST  |==END==|
                                         - - - - - - - - - - - - - - - - - -

                                         << Config settings >>
                                         - - - - - - - - - - - - - - - - - -
                                         Func.   |Item   |Option
                                         - - - - - - - - - - - - - - - - - -
                                         CONFIG  |TEAROFF|MANUAL
                                         CONFIG  |TEARPOS|VISIBLE
                                         CONFIG  |CUTLOAD|AUTO
                                         CONFIG  |LOADTIM|1.0 SEC
                                         CONFIG  |DECODE |DIRECT
                                         CONFIG  |AREACNT|DISABLE
                                         CONFIG  |ON-LOAD|ONLINE
                                         CONFIG  |LOCK   |NONE
                                         CONFIG  |//S//  |DISABLE
                                         CONFIG  |CONT-PE|EDGE
                                         CONFIG  |GATHER |DISABLE
                                         CONFIG  |CUT-CTL|SPEED
                                         CONFIG  |SKIP-PR|ENABLE
                                         CONFIG  |STATUS |ENABLE
                                         CONFIG  |==END==|
                                         - - - - - - - - - - - - - - - - - -
```

*1   FORMAT to CD are not printed when the serial interface option is not installed or when PARALEL option is selected for INTRFCE.

*2   TEAR-EN is printed after TEARPOS when AUTO option is selected for TEAROFF.

*3   LOADTIM is printed after this line when AUTO option is selected for CUTLOAD.

Printout of factory defaults using LIST

Setup Mode

DECIDING WHICH OPTIONS TO CHANGE

The previous page shows a printout of the printer's factory default settings. In this printout, options are listed by functional group:

- Menu 1 settings (MENU1 function)
- Menu 2 settings (MENU2 function)
- Hardware settings (HARDWRE function)
- Print position adjustment settings (ADJUST function)
- Configuration settings (CONFIG function)

Most selectable options only alter print features, such as the typestyle, page format, and color selection. However, some options must be selected correctly for the printer to work properly with your hardware and software. For each function, Table 5.2 lists items whose options must be selected correctly for system and printer accessory compatibility.

Table 5.2 Required Options

Function	Item	Option
MENU1	EMULATE	*The emulation selected on the printer must be the same as the emulation selected in your software.* If you selected an emulation when you set up the printer (Chapter 2), you do not need to change the EMULATE option unless you want to change to a different emulation. The emulation assigned to MENU1 is the default when you turn the printer on. See the section **Changing MENU1 and MENU2 Options** later in this chapter.
MENU2	None	*If you use MENU2, the emulation selected for MENU 2 must be the same as the emulation selected in your software.* See the section **Changing MENU1 and MENU2 Options** later in this chapter.

Table 5.2 Required Options (Cont.)

Function	Item	Option
HARDWRE	FORMAT BAUD-RT PROTOCL DSR DUPLEX CTS CD	*If you have a serial interface, the serial interface options selected on the printer must be the same as the settings you selected using your software or your computer operating system.* If the settings are not the same, the printer will not print or will print garbage. See the section **Changing Hardware Options** later in this chapter.
ADJUST	None	If you are not using software to specify the top margin of the page, use the printer's default top-of-form setting, 1 inch (25.4 mm) from the top of the paper. If you are using software to specify the top margin of the page, change the default setting to 1/6 inch (4.2 mm). See the section **Changing Print Position Adjustment Options** later in this chapter.
CONFIG	None	If you are using paper that is dark-colored or preprinted with dark colors, you may need to disable the AREA OVER detection function. See the section **Changing Configuration Options** later in this chapter.

Setup Mode

CHANGING MENU1 AND MENU2 OPTIONS

The MENU1 and MENU2 functions allow you to change the print options assigned to MENU1 and MENU2 on the printer control panel. In normal (nonsetup) mode, you can easily switch between the menus for printing, as described in Chapter 4.

MENU1 is invoked when you first turn the printer on.

Select the same emulation on the printer as is selected in your software. If the emulations are not the same, the printer will not work correctly with your software. If you plan to use two different emulations on a regular basis, assign the most frequently used emulation to MENU1. Assign the second emulation to MENU2. All of the other settings available for MENU1 and MENU2 are optional. Some of the items and options will vary with the emulation.

To determine which features your software supports, refer to your software documentation.

Table 5.3 describes the MENU1 and MENU2 items and options. Both functions offer the same items and options. The items in Table 5.3 are listed in the order in which they are printed. Not all items are defined for all emulations and some options vary with the emulation.

The procedure for changing the MENU1 and MENU2 options is described after Table 5.3.

Table 5.3 MENU1 and MENU2 Items and Options

NOTES:
- Underlined options are the factory defaults.
- Asterisks identify items and options that differ for the IBM XL24E and Epson ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
<EMULATE>		Select the same emulation as is selected in your software. See the section **Selecting an Emulation in** Chapter 2 for information on selecting an emulation.
	<u>DPL24C+</u>	Fujitsu DL-series printers (DPL24C PLUS command set)
	XL24E ESC/P2	IBM Proprinter XL24E printers Epson printers using the ESC/P2 command set
		NOTE: When you change the emulation, all MENU1 or MENU2 options are reset to the factory defaults for that emulation.
<FONT>		For each of the following fonts, the recommended pitch settings are given after the font name. When you change the font, be sure to also change the pitch, if required.
	<u>COUR 10</u> PRSTG12 COMPRSD BOLDFCE PICA 10 CORRESP OCR-B OCR-A COUR-N COUR-B COUR-I N.SAN-N N.SAN-B N.SAN-I	Courier, 10cpi Prestige Elite, 12cpi Compressed font, 15,17,and 18cpi Boldface, Proportional Pica, 10cpi Correspondence,10cpi OCR-B, 10cpi OCR-A, 10cpi Courier Normal, 10cpi **Courier Bold, 10cpi** *Courier Italic, 10cpi* Nimbus Sans Normal, Prop. **Nimbus Sans Bold, Prop.** *Nimbus Sans Italic, Prop.*

Setup Mode

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
• Underlined options are the factory defaults.
• Asterisks identify items and options that differ for the IBM XL24E and Epson
  ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
<FONT> (continued)	TIMLS-N TIMLS-B TIMLS-I DOWNLD#	**Timeless Normal, Prop.** **Timeless Bold, Prop.** *Timeless Italic, Prop.* Font 0 or font 1 in the printer's download RAM See Appendix F for font examples.
<QUALITY>		Select the print quality that most often meets your needs.
	LETTER	Letter print quality. This option provides the highest resolution but the slowest print speed. It cannot be used with the compressed font.
	REPORT	Report print quality. This option provides lower resolution than letter quality, but at twice the speed. If you want only the double speed, regardless of fonts, use the correspondence font. The quality of the correspondence font is higher than that of report.
	DRAFT	Regular draft print quality. This option provides lower resolution than report quality, but at 3.2 times letter speed.
	HI-DRFT	High-speed draft print quality. This option provides lower resolution than draft quality, but at 3.5 times letter speed.

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
- Underlined options are the factory defaults.
- Asterisks identify items and options that differ for the IBM XL24E and Epson ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
\<PITCH\>	## CPI	2.5, 3, 5, 6, <u>10</u>, 12, 15, 17, 18, or 20 cpi (characters per horizontal inch)
	PROP SP	Proportional spacing (1/12 inch per character space)
\<LINE SP\>	## LPI	1, 2, 3, 4, 5, <u>6</u>, 7, or 8 lpi (lines per vertical inch) **6 lpi** **3 lpi (double spacing)** ABCD ABCD ABCD ABCD ABCD ABCD ABCD ABCD ABCD
\<CHAR-W\>		Change also the pitch 2 TIMES or 4 TIMES is selected.
	<u>NORMAL</u>	Standard character width **ABCD**
	2 TIMES	Double character width ABCD
	4 TIMES (*1)	Quadruple character width ABCD

Setup Mode

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
- Underlined options are the factory defaults.
- Asterisks identify items and options that differ for the IBM XL24E and Epson ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
<CHAR-H>		Change also the line spacing if 2 TIMES or 4 TIMES is selected.
	<u>NORMAL</u>	Standard character height **ABCD abcd**
	2 TIMES	Double character height ABCD abcd
	4 TIMES (*1)	Quadruple character height ABCD abcd
<ATTRIB>		Selects an attribute to add emphasis to your documents. Only one attribute may be selected at a time.
	<u>NONE</u>	Standard characters (no attributes)
	ITALICS	*Italic printing*
	CONDNSD (*1)	Condensed printing
	SHADOW	**Double printing with a slight horizontal offset**
	BOLD	Double printing at the same position

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
- Underlined options are the factory defaults.
- Asterisks identify items and options that differ for the IBM XL24E and Epson ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
<PAGE LG>		Specifies the length of the page in inches.
	## IN	For DPL24C PLUS and IBM XL24E emulations: 3.0, 3.5, 4.0, 5.0, 5.5, 6.0, 7.0, 8.0, 8.5, <u>11.0</u> (letter size), 11.6 (A4 size), 12.0, 14.0, or 18.0 inches For Epson ESC/P2 emulation: 4.0, 4.5, 5.0, ..., <u>11.0</u>, 11.5, ..., 22.0 inches
<LFT-END>		Specifies the print start column for changing the left margin. Printing starts at the position given by this column plus your software-specified left margin.
	## COLM	Column <u>1</u>, 2, 3, ..., 41

Setup Mode

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
• Underlined options are the factory defaults.
• Asterisks identify items and options that differ for the IBM XL24E and Epson
  ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
<TOP-MRG>		Specifies the number of space lines for the top margin. The resultant blank space is the <TOP-MRG> setting minus 1 line. The total size of your top margin is the above resultant value plus the following two *settings:* top-of-form (default = 1 inch) and the software-specified top margin. If you are using software to specify the top margin, use the default (1 line) for <TOP-MRG>.
	## LINE	1, 2, 3,4, 5, 6, 7, 8, 9, or 10 lines

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
• Underlined options are the factory defaults.
• Asterisks identify items and options that differ for the IBM XL24E and Epson
  ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
<LANGUGE>		Selects a language. Appendix E shows the character sets for each language.
		Two-pass means that diacritical marks are printed separately from their letters and that letters are printed without any reduction.
		The first listing is common to all emulations. Options specific to each emulation are skipped. See the subsequent listings (*2) and(*3).
	USA	American English (Same as code page 437)
	UK	British English
	GERMAN	German
	SWEDISH	Swedish
	<u>PAGE437</u>	Code page 437
	PAGE850	Code page 850
	PAGE860	Code page 860
	PAGE863	Code page 863
	PAGE865	Code page 865
	ECMA94	ECMA 94
	ISO8859	ISO 8859-1
	PG852	Code page 852
	PG852-T	Code page 852 two-pass
	PG855	Code page 855
	PG866	Code page 866
	HUNGARY	Hungarian
	HUNG-T	Hungarian two-pass

Setup Mode

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
• Underlined options are the factory defaults.
• Asterisks identify items and options that differ for the IBM XL24E and Epson
  ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
<LANGUGE>	SLOV	Slovenian
(continued)	SLOV-T	Slovenian two-pass
	POLISH	Polish
	POLSH-T	Polish two-pass
	MAZOWIA	Mazowian
	MAZOW-T	Mazowian two-pass
	LATIN2	Latin 2
	LATIN2-T	Latin 2 two-pass
	KAMENIC	Kamenicky
	KAMEN-T	Kamenicky two-pass
	TURKY	Turkish
	TURKY-T	Turkish two-pass
	CYRILIC	Cyrillic
	IBM437	IBM 437
	IBM851	IBM 851
	ELOT928	ELOT 928
	PG-DHN	Code page DHN
	LATIN-P	Latin Polish
	ISO-LTN	ISO Latin
	LITHUA1	Lithuanian1
	LITHUA2	Lithuanian2
	MIK	
	MACEDON	Macedonian
	PG-MAC	
	ELOT927	
	ABG	
	ABY	
	DEC GR	
	HBR-OLD	
	PG862	
	HBR-DEC	
	GREEK 11	
	ISO-TUK	ISO Turkish
	RUSCII	
	LATIN-9	

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
- Underlined options are the factory defaults.
- Asterisks identify items and options that differ for the IBM XL24E and Epson ESC/P2 emulations. The notes are defined at the end of the table.
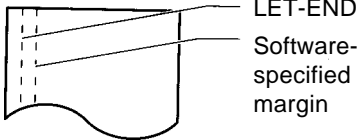
MENU1 and MENU2 Items	Options	Description
<LANGUGE> (continued)	(*2) FRENCH	French
	ITALIAN	Italian
	SPANISH	Spanish
	DANISH1	Danish I
	DANISH2	Danish II
	FINNISH	Finnish
	NORWEGN	Norwegian
	(*3) DANISH1	Danish I
	ITALIAN	Italian
	SPANSH1	Spanish I
	SPANSH2	Spanish II
	JAPAN	Japanese
	NORWEGN	Norwegian
	LATIN A	Latin American
	FRENCH	French
	DANISH2	Danish II
	KOREA	Korea
	LEGAL	Legal

Setup Mode

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
- Underlined options are the factory defaults.
- Asterisks identify items and options that differ for the IBM XL24E and Epson ESC/P2 emulations. The notes are defined at the end of the table.
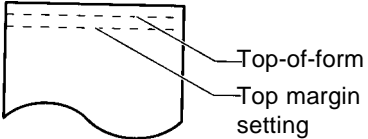
MENU1 and MENU2 Items	Options	Description
<CHR-SET>	SET 1 SET 2	IBM character set 1 IBM character set 2 If a downloaded (soft) font is used, the character set for that font overrides the <CHR-SET> setting.
	(*3) ITALIC GRAPHIC	Italic characters are available. Graphics characters (ruled lines) are available.
<PRF-SKP>		For continuous forms, this option specifies whether an inch is skipped around the perforation. If you are not using software to specify a bottom margin, select SKIP when using thicker, multipart forms.
	SKIP	One inch is skipped around the perforation.
	NO-SKIP	The perforation is not skipped. Printing continues in the bottom margin of the page.
<ZEROFNT> (*2)		Specifies whether to print the number zero with a slash. This is useful to distinguish the capital letter "O" from the number "0". Invalid for some soft fonts.
	NO-SLSH SLASH	0 Ø

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
• Underlined options are the factory defaults.
• Asterisks identify items and options that differ for the IBM XL24E and Epson
  ESC/P2 emulations. The notes are defined at the end of the table.
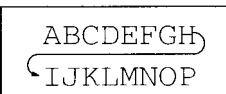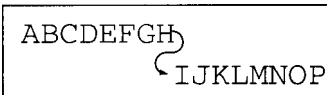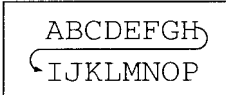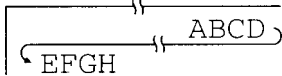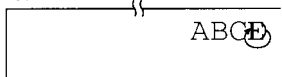
MENU1 and MENU2 Items	Options	Description
<DC3-CDE> (*4)	ENABLE	Enables the DC1 and DC3 codes. Any data received between DC3 and the next DC1 is ignored.
	DISABLE	Disables the DC1 and DC3 codes. These codes are then ignored.
<CR-CODE>	CR ONLY	No line feed is added to a carriage return. ABCDEFGH
	CR & LF	A line feed is added to each carriage return. ABCDEFGH IJKLMNOP
<LF-CODE> (*3)	LF ONLY	No carriage return is added to a line feed. ABCDEFGH IJKLMNOP
	LF & CR	A carriage return is added to each line feed. ABCDEFGH IJKLMNOP

Setup Mode

Table 5.3 MENU1 and MENU2 Items and Options (Cont.)

NOTES:
• Underlined options are the factory defaults.
• Asterisks identify items and options that differ for the IBM XL24E and Epson ESC/P2 emulations. The notes are defined at the end of the table.

MENU1 and MENU2 Items	Options	Description
\<RGHTEND>	<u>WRAP</u>	End-of-line wrap. Causes a carriage return plus a line feed. ABCD EFGH
	OVR-PRT	Characters are overprinted at the end of a line. ABCDE
\<==END==>		Indicates the end of MENU1 items. Press the MENU button to print the first item, \<EMULATE>. Press the TEAR OFF button to print the previous item, \<RGHTEND>. Press the ONLINE button to reprint the \<\<FUNCTION>> menu.

*1 Unavailable in the IBM XL24E emulation

*2 Unavailable in the Epson ESC/P2 emulations

*3 Available only in the Epson ESC/P2 emulations

*4 Available only in the DPL24C+ emulation

Procedure

To change the options assigned to MENU1 or MENU2, make sure that continuous forms paper is loaded and then proceed as follows:

1. Enter setup mode.

Press the TEAR OFF button and the ONLINE button simultaneously until the printer beeps. Wait for the printer to stop printing. The following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST  SELF-TST  HEX-DUMP
  V-ALMNT
```

2. Select the MENU1 or MENU2 function.

Repeatedly press the LOAD button or the LF/FF button to position the red cursor under either the MENU1 or MENU2 function. Press the TEAR OFF button or the MENU button to select the function and print the following <EMULATE> options:

```
<EMULATE>       DPL24C+   XL24E    ESC/P2
```

3. Select an emulation.

Repeatedly press the LOAD button or the LF/FF button to position the cursor under the emulation you require. Then do either of the following:

- Press the MENU button to select the emulation and print the next MENU1 or MENU2 item. (As shown in Table 5.3, this is the <FONT> item).

- Press the TEAR OFF button to select the emulation and print <==END==>. Press the MENU button again to print the last MENU1 or MENU2 item. (As shown in Table 5.3, this is the <RGHTEND> item). The TEAR OFF button is convenient when the options you need to change are near the end of the list of items.

Setup Mode

NOTE
Whenever you select a new emulation, all MENU1 or MENU2 options are reset to the factory defaults for that emulation.

4. **If necessary, change the other MENU1 or MENU2 options.**

   Press the LOAD button or the LF/FF button to move the cursor to the option you want to select. Press the MENU button to select the option and print the next item listed in Table 5.3. Press the TEAR OFF button to select the option and print the previous item.

5. **Exit MENU1 or MENU2.**

   Press the ONLINE button to exit the selected function and reprint the <<FUNCTION>> menu.

6. **Do either of the following:**

   • **Select another function, or**
   • **Exit setup mode, saving your changes.**

   For details about other functions, see the other sections in this chapter. To exit setup mode and save your changes, make sure the red cursor is positioned beneath SAVE & END, and then press the TEAR OFF button or the MENU button.

Resetting MENU1 and MENU2

To reset the factory defaults for both MENU1 and MENU2, select the DEFAULT function. For more information, see the section **Resetting Defaults** later in this chapter. The DEFAULT function cannot reset those options which are handled by the HARDWRE, ADJUST, and CONFIG functions.

CHANGING HARDWARE OPTIONS

The HARDWRE function defines the printer's hardware operating conditions. If you are using the optional RS-232C serial interface, the serial interface options must be set properly for the printer to function correctly with your system hardware.

Table 5.4 describes the HARDWRE items and options . Items are listed in the order in which they are printed. The procedure for changing the hardware options is described after Table 5.4.

Table 5.4 HARDWRE Items and Options

NOTE: Underlined options are the factory defaults.

HARDWRE Items	Options	Description
<PPR-OUT>		Specifies how the printer responds when you run out of paper.
	CNTONLY	The printer detects paper-out only for continuous forms. Printing stops and the PAPER OUT indicator lights red.
	<u>DETECT</u>	The printer detects paper-out for both continuous forms and single sheets. Printing stops and the PAPER OUT indicator lights red.
	IGNORE	The printer ignores paper-out for both continuous forms and single sheets. Printing continues until no more data remains. No PAPER OUT warning is displayed.
		NOTE: For cut sheet feeders, printing stops and the PAPER OUT indicator lights red, regardless of the PPR-OUT setting.

Setup Mode

Table 5.4 HARDWRE Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

HARDWRE Items	Options	Description
<PRT-DIR>	<u>BI-DIR</u>	Bidirectional printing. The printer prints in either direction while seeking the next print direction for a shorter print time.
	UNI-DIR	Unidirectional printing. Unidirectional printing is used for printing vertical lines in tables even if vertical alignment is not adjusted. Unidirectional printing is slower than bidirectional printing.
<BUZZER>		Enables or disables the printer status buzzer.
	<u>ON</u>	Buzzer on (recommended). The printer beeps to indicate paper-out or other conditions.
	OFF	Buzzer off under any conditions.
<WORD-LG>		To determine the required word length, refer to your computer documentation. Select 8-BIT to print bit image graphics.
	<u>8 BIT</u>	8-bit word length (used by most computers)
	7 BIT	7-bit word length (MSB = 0)
<BUFFER>		Assigns buffer memory to input data and downloaded font data.

<BUFFER> continued:

	Print buffer	Download buffer
NONE	0 byte	128K bytes
256BYTE	256 bytes	127.75K bytes
2KBYTE	2K bytes	126K bytes
<u>8KBYTE</u>	8K bytes	120K bytes
24KBYTE	24K bytes	104K bytes
32KBYTE	32K bytes	96K bytes
96KBYTE	96K bytes	32K bytes
128KBYT	128K bytes	0K bytes

Table 5.4 HARDWRE Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

HARDWRE Items	Options	Description
<BUFFER> (continued)		**NOTE:** • **0BYTE option is recommended only for graphics application.** • **With 128KB selected, the printer cannot accept any download font data.**
<INTRFCE>		Selects the type of the interface to the computer.
	<u>PARALEL</u> SERIAL USB AUTO-2S AUTO-4S AUTO-6S AUTO-10S AUTO-15S AUTO-20S	Centronics parallel interface RS-232C serial interface USB interface Auto interface selection mode • Both interfaces are ready for communication. • Specify the timing regarding the selected interface as being inactive.

Serial Interface or USB interface Items. The following <FORMAT> to <DUPLEX> items are not printed when you select the PARALEL option for the <INTRFCE> item. Be sure that the options selected on the printer are the same as the options selected using your computer operating system or your software. Refer to the documentation provided for your computer and software.

<FORMAT>		Number of data bits	Parity bit	Number of stop bits
	<u>8NONE 1</u>	8	None	1
	8NONE 2	8	None	2
	8EVEN 1	8	Even	1
	8ODD 1	8	Odd	1
	7EVEN 1	7	Even	1
	7ODD 1	7	Odd	1
	7MARK 1	7	Mark	1
	7SPACE 1	7	Space	1
	7EVEN 2	7	Even	2
	7ODD 2	7	Odd	2

The data format also includes a start bit. The mark is logical 1. The space is logical 0.

Setup Mode

Table 5.4 HARDWRE Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

HARDWRE Items	Options	Description
<BAUD-RT>	150 300 600 1200 2400 4800 <u>9600</u> 19200	The baud rate is in bps (bits per second). Select the same baud rate as used by your computer or modem.
<PROTOCL>	 <u>XON/XOF</u> DTR REV-CHL	Indicates data transmission protocol. The DC1 and DC3 codes are used. The Data Terminal Ready signal is used. The Reverse Channel signal is used.
<DSR>	<u>IGNORE</u> DETECT	DSR is ignored by the printer. DSR is detected by the printer.
<DUPLEX>	<u>FULL</u> HALF	Simultaneous data transmission occurs in opposite directions. Data transmission occurs in either direction, but not simultaneously.
<CTS>	IGNORE <u>DETECT</u>	CTS is ignored by the printer. CTS is detected by the printer.
<CD>	IGNORE <u>DETECT</u>	CD is ignored by the printer. CD is detected by the printer.
<==END==>		Indicates the end of the HARDWRE item list. Press the MENU button to print the first item, which is <PPR-OUT>. Press the TEAR OFF button to print the previous item. Press the ONLINE button to reprint the <<FUNCTION>> menu.

Procedure

To change the printer's hardware options, make sure that continuous forms
are loaded and then proceed as follows:

1. **Enter setup mode.**

   Press the TEAR OFF button and the ONLINE button simultaneously
   until the printer beeps. Wait for the printer to stop printing and
   check that the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>

  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST  SELF-TST  HEX-DUMP
  V-ALMNT
```

2. **Select the HARDWRE function.**

   Repeatedly press the LOAD button or the LF/FF button to position
   the red cursor under HARDWRE**.** Press the MENU button to select
   the HARDWRE function and print the first item and its options, as
   shown below:

```
 <PPR-OUT>      CNTONLY   DETECT    IGNORE
```

3. **Select an option for the selected item.**

   Press the LOAD button or the LF/FF button to move the cursor to the
   option you require. Press the MENU button to select the option and
   print the next item.

   NOTE
   To print the previous item, press the TEAR OFF button.

4. **Repeat step 3 until all required options are changed.**

5. **Exit the HARDWRE function.**

   Press the ONLINE button to exit the HARDWRE function and
   reprint the <<FUNCTION>> menu.

Setup Mode

6. **Do either of the following:**

   • **Select another function, or**

   • **Exit setup mode, saving your changes.**

   For details on other functions, see the other sections in this chapter. To exit setup mode and save your changes, make sure that the red cursor is positioned under SAVE/END, then press the MENU button or the TEAR OFF button.

CHANGING PRINT POSITION ADJUSTMENT OPTIONS

When you print using ruled paper, you often want to adjust the print position so that the print sits properly on the ruled lines. The ADJUST function allows you to:

• Set top-of-form position
• Fine-tune top-of-form position
• Fine-tune left print start column (left margin)
• Adjust for accumlative line spacing error in a page

The first three items are provided separately for cut single sheets and continuous forms. The last item is available for single sheets only.

The top edge of your paper is the *physical* top of the page. The *logical* top of the page, as "understood" by the printer when loading paper, is called the top-of-form. Printing starts at this position. Note that printing actually starts at the position obtained by adding the following:

• Top-of-form, default = 1 inch (25.4 mm)
• Top margin specified by your software
• Printer TOP-MRG (top margin setting), default = 1 line

Table 5.5 describes the ADJUT items and options. Items are listed in the order they are printed. The procedure for changing top-of-form is described after Table 5.5.

Table 5.5 ADJUST Items and Options

NOTE: Underlined options are the factory defaults.

ADJUST Items	Options	Description
<CNT-ORG>		Sets the top-of-form for continuous forms in increments of 1/6 inch (4.2 mm) from the physical top of the page.
	1/6 IN 1.8/6 IN : 6/6 IN : 66/6 IN	The default is recommended if your top margin is not software-specified. A setting of 1/6 inch is preferable when your top margin is software-specified.
<CNTFINE>	0/180, ..., 29/180	Fine-tunes the top-of-form position for continuous forms. Increases top-of-form in increments of 1/180 inch (0.14 mm).
<CUT-ORG>		Sets the top-of-form for single sheets in increments of 1/6 inch (4.2 mm) from the physical top of the page.
	1/6 IN 1.8/6 IN : 6/6 IN : 66/6 IN	The default is recommended if your top margin is not software-specified. A setting of 1/6 inch is preferable when your top margin is software-specified.
<CUTFINE>		Fine-tunes the top-of-form position for single sheets.
	0/180, ..., 29/180	Increases top-of-form in increments of 1/180 inch (0.14 mm).

Setup Mode

Table 5.5 ADJUST Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

ADJUST Items	Options	Description
<CNT-LFT>		Fine-tunes the left print start position for continuous forms.
	–10/90, ..., <u>0/90</u>, ..., 10/90	Moves the position left or right in increments of 1/90 inch (0.28 mm).
<CUT-LFT>		Fine-tunes the left print start position for single sheets.
	–10/90, ..., <u>0/90</u>, ..., 10/90	Moves the position left or right in increments of 1/90 inch (0.28 mm).
<CUT-ADJ>		Compensates the line spacing pitch on the basis of the spacing error accumulated for feeding single sheets by 10 inches.
	–21/360, –14/360, –7/360, <u>0/360</u>, 7/360, 14/360, 21/360	Decreases or increases in increments of 1/360 inch in total.
<CNFADJ>	–28/360, –21/360, –14/360, –7/360, <u>0/360</u>, 7/360, 14/360, 21/360, 28/360	Compensates for the forms feed error accumulated through feeding of continuous forms.
<CNTADJL>	–21/360, –14/360, –7/360, <u>0/360</u>, 7/360, 14/360, 21/360	Compensates for the forms feed error accumulated through feeding of continuous forms. (Last page)

Table 5.5 ADJUST Items and Options (Cont.)

ADJUST Items	Options	Description
<==END==>		Indicates the end of the ADJUST item list. Press MENU to print the first item, which is <CNT-ORG>. Press TEAR OFF to print the last item, which is <CUT-ADJ>. Press ONLINE to reprint the <<FUNCTION>> menu.

Setup Mode

Procedure

Before adjusting a print position, you should carefully measure the amount
of adjustment required for any paper that demands precise print registration.
To adjust a print position, make sure that continuous forms paper is loaded.
The following example shows how to adjust the top-of-form setting for
continuous forms.

1. **Enter setup mode.**

   Press the TEAR OFF button and the ONLINE button simultaneously
   until the printer beeps. Wait for the printer to stop printing and
   check that the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST   SELF-TST  HEX-DUMP
  V-ALMNT
```

2. **Select the ADJUST function.**

   Repeatedly press the LOAD button or the LF/FF button to position
   the red cursor under ADJUST. Press the MENU button or the TEAR
   OFF button to select the ADJUST function and print the following
   <CNT-ORG> options:

```
<CNT-ORG>
 1/6IN    1.8/6IN   2/6IN   3/6IN   4/6IN   5/6IN   6/6IN   7/6IN   8/6IN   9/6IN
 10/6IN  11/6IN    ....
```

3. **Select an option from 1/6IN to 66/6IN.**

   Press the LOAD button or the LF/FF button to move the cursor to the
   required option. Press the MENU button to select the option and
   print the <CNTFINE> item. If necessary, fine-tune the top-of-form
   position now. Otherwise, go to step 4.

4. **Exit the ADJUST function.**

   Press the ONLINE button to exit the ADJUST function and reprint
   the <<FUNCTION>> menu.

5. **Exit setup mode, saving the top-of-form setting.**

   Make sure that the red cursor is positioned beneath SAVE & END, then press the MENU button or the TEAR OFF button.

6. **Check the top-of-form setting.**

   Load your paper and check the adjustment by printing a sample page using your software. If necessary, reenter setup mode and fine-tune the top-of-form position by changing the <CNTFINE> option.

CHANGING CONFIGURATION OPTIONS

The CONFIG function defines the printer's primary configuration. You can set the following options to ensure that the printer meets your requirements:

- Tear off for continuous forms
- Autoloading of single sheets
- Direct decoding of certain commands
- Enabling of the AREA OVER indicator

Table 5.6 describes the CONFIG items and options. Items are listed in the order they are printed. The procedure for changing the configuration options is described after Table 5.6.

Table 5.6 CONFIG Items and Options

NOTE: Underlined options are the factory defaults.

CONFIG Items	Options	Description
<TEAROFF>		Auto or manual tearoff feed.
	<u>MANUAL</u>	Automatic tearoff feed is invalid, and tearoff feed must be done using the TEAR OFF button.
	AUTO	Automatic tearoff feed is valid but only for continuous forms. Tearoff feed can also be done using the TEAR OFF button.

Setup Mode

Table 5.6 CONFIG Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

CONFIG Items	Options	Description
<TEARPOS>	VISIBLE	Tearoff position. Select this option when your software positions forms to the next top-of-form after printing the last data. The printer performs tearoff feed without adding a form feed when data transfer has stopped.
	ALWAYS	Select this option when your soft-ware stops after printing the last data. The printer performs tearoff feed after adding a form feed when data transfer has stopped. **Note: For both settings, tearoff positioning will fail if the page length setting does not match the actual perforation spacing.**
The following <TEAR-EN> item is printed when TEAROFF:AUTO is specified for the <TEAROFF> item.		
<TEAR-EN>	0 SEC 1 SEC 2 SEC 4 SEC 6 SEC	Tearoff enabled time (offset time). The offset time is from when data transfer stops to when the printer performs automatic tearoff feed. If the printer receives data again within the offset time, the printer does not perform automatic tearoff feed.

Table 5.6 CONFIG Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

CONFIG Items	Options	Description
<TEAR-EN> (continued)		In some application programs, data transfer may stop temporarily due to internal processing. This setting can avoid an undesired tearoff feed by waiting for up to six seconds each time data transfer stops.
<CUTLOAD>		Single sheet autoloading.
	AUTO	Single sheet paper is automatically loaded a certain time after you set the paper.
	<u>BUTTON</u>	Single sheet paper can be loaded by pressing the LOAD button.
The following <LOADTIM> item is printed when CUTLOAD:AUTO is specified for the <CUTLOAD> item.		
<LOADTIM>	0.5, <u>1.0</u>, 1.5, 2.0 2.5, 3.0SEC	Autoload start time. Autoloading starts when this amount of time passes after you set single sheet paper.
<DECODE>	<u>DIRECT</u>	Command decode timing. The printer decodes certain commands immediately after receiving data. Example: ESC SUB I, ESC CR P (DPL24C+) ESC Q # (IBM XL24E)
	QUEUED	The printer decodes commands after storing all data (including commands) in the input buffer. This speeds data reception because the printer does not require decoding time during data reception.

Setup Mode

Table 5.6 CONFIG Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

CONFIG Items	Options	Description
<AREACNT>		Area-over detection control.
	ENABLE	Detects the left and right edges of paper when loading the paper. The printer does not print data beyond the edges, but turns on the AREA OVER indicator.
	DISABLE	Does not detect the edges. Select this option when you are using colored or preprinted paper.
<ON-LOAD>		Printer status after loading paper in offline mode.
	OFFLINE	Remains offline after paper loading.
	ONLINE	Goes into online after paper loading.
<LOCK>		Lock function of setup mode.
	NONE	Enables all buttons on the control panel.
	SETUP	Disables the setup-related buttons to keep the printer from entering setup mode during the offline state.
	ALL	Disables the setup-rlated buttons and the LOCK, FONT, and MENU buttons.
<//S//>		Effectiveness of the Cut Sheet Selection command (//S//).
	DISABLE	Makes the command ineffective.
	ENABLE	Makes the command effective.
		Note: The Cut Sheet Selection command (//S//) changes the paper source to the paper table and waits for manual insertion of a cut sheet.

Table 5.6 CONFIG Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

CONFIG Items	Options	Description

<CONT-PE>	TRACTOR	Detection of end of continuous forms. Paper end is detected by the sensor on the tractor unit.
		Paper-end unprinted area:
		    Continuous forms: About 80 mm
		    Botom feeding: About 35 mm

	EDGE	Regardless of paper end, printing continues near to the edge of paper. Paper-end unprinted area: About 4.7 mm for both continuous forms and bottom feeding
GATHER		Setting of ribbon protective control at a line feed on continuous forms
	ENABLE	The protective control is executed.
	DISABLE	The protective control is not executed. For information about the function, see Section 13.8.
CUT-CTL		Setting of retracting control at canceling TEAR OFF of continuous forms.
	PRCISIN	The precision-prioritized retracting control is executed. It retracts a certain amount of paper (the top part of the paper which hangs out from the TOFS), and then moves back to the position before TEAR OFF. If TOFS detects paper end when a certain amount of paper is retracted, it executes the continuous forms save operation and then executes the paper loading operation.
	SPEED	The speed-prioritized retracting control is executed. It retracts the paper by the amount the paper was advanced.

Setup Mode

Table 5.6 CONFIG Items and Options (Cont.)

NOTE: Underlined options are the factory defaults.

CONFIG Items	Options	Description
SKIP-PR		Setting of printing speed change processing (skip)
	ENABLE	The skip processing is executed. When certain amount of blank spaces are found in a line, it changes the printing speed for the blank spaces.
	DISABLE	The skip processing is not executed. It does not change the printing speed for the blank spaces. - If the printing speed of the printing data varies before and after the blank spaces (such as LQ characters + blank space + CG characters), it changes printing speeds regardless of this setting.
STATUS		Setting of the asynchronous status function
	ENABLE	The status information is stored in the send buffer by a nibble mode request.
	DISABLE	The status information is not stored in the send buffer by a nibble mode request.
<==END==>		Indicates the end of the CONFIG item list. Press the MENU button to print the first item, which is <TEAROFF>. Press the TEAR OFF button to print the previous item. Press the ONLINE button to reprint the <<FUNCTION>> menu.

Procedure

To change the printer configuration options, make sure that continuous forms paper is loaded and then proceed as follows:

1. **Enter setup mode.**

   Press the TEAR OFF button and the ONLINE button simultaneously until the printer beeps. Wait for the printer to stop printing and check that the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST   SELF-TST  HEX-DUMP
  V-ALMNT
```

2. **Select the CONFIG function.**

   Repeatedly press the LOAD button or the LF/FF button to position the red cursor under CONFIG. Press the MENU button to select the CONFIG function and print the following <TEAROFF> options:

```
  <TEAROFF>        MANUAL   AUTO
```

3. **Select an option.**

   Press the LOAD button or the LF/FF button to move the cursor to either MANUAL or AUTO. Press the MENU button to select the option and print the <TEARPOS> item. If other items must be specified, do so now. Otherwise, go to step 4.

4. **Exit the CONFIG function.**

   Press the ONLINE button to exit the CONFIG function and reprint the <<FUNCTION>> menu.

5. **Do either of the following:**

   • **Select another function, or**
   • **Exit setup mode, saving your changes.**

   For details on other functions, see the other sections in this chapter. To exit setup mode and save your changes, make sure that the red cursor is positioned under SAVE & END, then press the MENU button or the TEAR OFF button.

Setup Mode

EXITING AND SAVING

This section describes how to exit set up mode save any changes you made:

To exit setup mode immediately, select the SAVE & END function.

Any settings changed while in setup mode are saved as the new power-on defaults for the printer. The new defaults remain active until you change them again.

NOTE
The only way to exit setup mode without saving your changes is to turn off the printer. When you turn the printer back on, the previous default settings are used.

Procedure

To exit setup mode and save your changes using SAVE/END, proceed as follows:

1. **Print the <<FUNCTION>> menu.**

   The <<FUNCTION>> menu should be the last printed line on the page. If the menu is not printed, press the ONLINE button to print the menu. If you are using the SELF-TST or HEX-DUMP function, press the LF/FF button instead of the ONLINE button to print the menu. The <<FUNCTION>> menu is shown below.

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST  SELF-TST  HEX-DUMP
  V-ALMNT
```

2. **Select the SAVE/END function.**

   Make sure that the red cursor is positioned under SAVE & END**.** Press the MENU button or the TEAR OFF button to select SAVE & END. The printer exits setup mode and returns online (the ONLINE indicator lights green). Any changes you made while in setup mode are saved.

RESETTING DEFAULTS

This section describes how to reset the printer's power-on defaults, all of the factory defaults, or the factory defaults only for MENU1 and MENU2.

Resetting Power-On Defaults

Power-on defaults are the settings saved in the printer's permanent memory. The defaults are enabled whenever you turn the printer on. The easiest way to reset the power-on defaults is to turn the printer off and then on again. This method is useful if you have made changes in setup mode that you do not want to save.

Resetting Factory Defaults

Factory defaults are those settings preselected at the factory. For a list of the printer's factory defaults, see the section **Printing a List of Selected Options** earlier in this chapter. To reset the factory defaults for all functions, proceed as follows:

1. Turn off the printer.

2. While pressing the MENU, TEAR OFF, and ONLINE buttons, turn on the printer. Continue to press all three buttons until the printer beeps.

   The factory defaults are now reset.

Resetting Factory Defaults in MENU1 and MENU2

This method resets factory defaults for MENU1 and MENU2 options, listed in Table 5.3, but does not reset the printer hardware, print position adjustment, and configuration options. To reset the factory defaults in MENU1 and MENU2, proceed as follows:

Setup Mode

1. **Enter setup mode.**

   Press the TEAR OFF button and the ONLINE button simultaneously
   until the printer beeps. Wait for the printer to stop printing and
   check that the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
 SAVE&END   MENU1   MENU2   HARDWRE   ADJUST   CONFIG   DEFAULT   LIST    SELF-TST   HEX-DUMP
 V-ALMNT
```

2. **Select the DEFAULT function.**

   Repeatedly press the LOAD button or the LF/FF button to position
   the red cursor under DEFAULT**.** Press the TEAR OFF button or the
   MENU button to select the DEFAULT function. The printer reprints
   the <<FUNCTION>> menu. The default values in MENU1 and
   MENU2 are now reset.

3. **Do either of the following:**

   • **Select new options for MENU1 or MENU2.**
   • **Exit setup mode, saving the factory defaults.**

   See the section **Changing MENU1 and MENU2 Options**. To exit
   setup mode and save the new defaults, make sure that the red cursor
   is positioned under SAVE & END, then press the TEAR OFF button
   or the MENU button.

USING THE DIAGNOSTIC FUNCTIONS

This section describes how to use the following diagnostic functions:

   • SELF-TST
   • HEX-DUMP
   • V-ALMNT

These functions are used for checking print quality and diagnosing printer
problems. HEX-DUMP also provides useful information for programmers.

Printing the Self-Test

The SELF-TST function prints test pages to check how the printer operates independently of your computer. The self-test does not check the interface between the computer and the printer.

The self-test prints the printer's firmware version, its resident emulations, and all of the characters available in the currently selected character set. If the DPL24C PLUS emulation is selected for MENU1, the self-test is printed using the settings currently assigned to MENU1.

Procedure

This procedure assumes that you are in setup mode. To print the self-test, make sure that continuous forms paper is loaded into the printer. Then proceed as follows:

1. **Print the <<FUNCTION>> menu.**

   The <<FUNCTION>> menu should be the last printed line on the page. If the menu is not printed, press the ONLINE button to print the menu. If you are using the HEX-DUMP function, press the LF/ FF button instead of the ONLINE button to print the menu. The following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST   SELF-TST  HEX-DUMP
  V-ALMNT
```

Setup Mode

2. **Select the SELF-TST function.**

   Repeatedly press the LOAD button or the LF/FF button to position the red cursor under SELF-TST, and then press the MENU button or the TEAR OFF button. The printer selects SELF-TST and starts printing. A short help menu is printed at the top of the page, followed by the self-test. Note that the printer *is not online* during self-test printing.

3. **Examine the self-test page.**

   A sample self-test page is shown in Chapter 2. To pause during self-test printing, press the MENU button or the TEAR OFF button. To resume self-test printing, press the FONT button or the MENU button again.

4. **Exit the SELF-TST function.**

   Exit the SELF-TST function in either of the following ways:

   • To exit SELF-TST and remain in setup mode, press the LF/FF button. The <<FUNCTION>> menu is then reprinted.

   • To exit SELF-TST and return online, press the ONLINE button. The printer permanently saves any changes made while in setup mode and returns online.

The self-test can also be started by turning off the printer, and then pressing the LF/FF button while turning the printer back on. As described in Chapter 2, this method is useful when you first set up the printer.

Printing Hex Dumps

The HEX-DUMP function prints data and commands in hexadecimal characters and abbreviated control codes. The IBM character set 2 is used for printing (see Appendix E). The HEX-DUMP function is useful for checking whether your computer is sending the correct commands to the printer and whether the printer is executing the commands correctly. It is also useful for debugging software programs.

Procedure

To print hex dumps, make sure that continuous forms paper is loaded into the printer. Then proceed as follows:

1. **Enter setup mode.**

   Press the TEAR OFF button and the ONLINE button simultaneously until the printer beeps. Wait for the printer to stop printing and check that the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST   SELF-TST  HEX-DUMP
  V-ALMNT
```

2. **Select the HEX-DUMP function.**

   Repeatedly press the LOAD button or the LF/FF button to position the red cursor under HEX-DUMP, then press the TEAR OFF button or the MENU button to select the HEX-DUMP function. The printer goes *online* and prints a header and a short help menu.

3. **Print the hex dump.**

   To start hex dump printing, send your file or program to the printer. The printer goes online and prints the hex dump.

   Press the MENU button or the TEAR OFF button to pause during hex dump printing. To resume hex dump printing, press the button again.

   NOTE
   When hex dump printing stops, the printer remains online in setup mode (the ONLINE indicator is green). To print another hex dump, send another file to the printer.

Setup Mode

```
*** Hex dump printing ***

BUTTON      ACTION
<ONLINE>    Exit to normal mode
<LF/FF >    Return to <<FUNCTION>> mode
<TEAROFF>   Pause/resume printing


0  1  2  3  4  5  6  7  8  9  A  B  C  D  E  F      0123456789ABCDEF
```

Sample hex dump

4. **Exit the HEX-DUMP function.**

   Exit the HEX-DUMP function in either of the following ways:

   • To remain in setup mode, press the LF/FF button. The
     <<FUNCTION>> menu is then reprinted. For details on other
     functions, see other sections in this chapter.

   • To return to online normal mode, press the ONLINE button. If
     you press the ONLINE button while the hex dump is printing, The
     printer immediately switches to normal online mode. Any data
     that was sent to the printer but not printed is discarded (cleared).

You can also enter hex dump mode, by turning off the printer, and then
turning the printer back on while simultaneously pressing the ONLINE
button and the LF/FF button until the printer beeps.

Checking Vertical Print Alignment (V-ALMNT)

The V-ALMNT function corrects the vertical character displacement that sometimes occurs with bidirectional printing. Characters printed from left to right are not aligned with characters printed from right to left as shown below:

```
This example shows how printing looks
 when characters are vertically
misaligned.  Note that the left
 margin is not straight.
```

If you notice misaligned printing, use the following procedure to check and correct the vertical print alignment.

Procedure

Make sure that continuous forms paper is loaded in the printer. If possible, use forms at least 216 mm (8.5 inches) wide to avoid printing on the platen. See the section **Changing MENU1 and MENU2 Options** for details. Then proceed as follows to check and correct vertical print alignment:

1. **Enter setup mode.**

   Press the MENU button and the TEAR OFF button simultaneously until the printer beeps. Wait for the printer to stop printing and check that the following <<FUNCTION>> menu is printed:

```
<<FUNCTION>>
  SAVE&END  MENU1  MENU2  HARDWRE  ADJUST  CONFIG  DEFAULT  LIST   SELF-TST  HEX-DUMP
  V-ALMNT
```

Setup Mode

2. **Select the V-ALMNT function.**

   Repeatedly press the LOAD button or the LF/FF button to position
   the red cursor under V-ALMNT, then press the MENU button or the
   TEAR OFF button to select the V-ALMNT function. The printer
   prints the help menu then starts printing rows of parallel bars using
   letter quality speed.

3. **Adjust the vertical print alignment at letter quality speed.**

   Examine the parallel bars. If the bars are aligned (not jagged), go to
   step 4. If the bars are offset to the left, repeatedly press the LOAD
   button until the bars are aligned. If the bars are offset to the right,
   repeatedly press the LF/FF button until the bars are aligned. (In the
   following figure, the first line is assumed to be printed from left to
   right.)
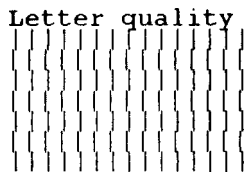
   Bars offset to the left   Bars offset to the right
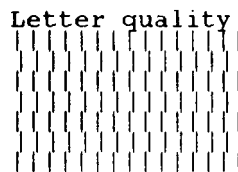
4. **Adjust the vertical print alignment at correspondence speed.**

   Press the TEAR OFF button to switch from letter speed to corre-
   spondence speed.

   Examine the parallel bars and adjust the vertical print alignment as
   described step 3.

5. **Adjust the vertical print alignment at draft speed.**

   Press the TEAR OFF button to switch from correspondence speed to
   draft speed.

   Examine the parallel bars and adjust the vertical print alignment as
   described step 3.

6. **Exit the V-ALMNT function.**

Press the ONLINE button to exit the V-ALMNT function and save the new vertical alignment settings. The printer exits setup mode and returns online.

NOTE
To exit the V-ALMNT function, you must exit setup mode.


```
*** Vertical alignment adjusting ***
BUTTON      ACTION
<ONLINE>    Save and exit to normal mode
< LOCK  >   Change speed
< FONT  >   Shift backward print position to right
< MENU  >   Shift backward print position to left




Letter quality




Correspondence




Draft quality
```
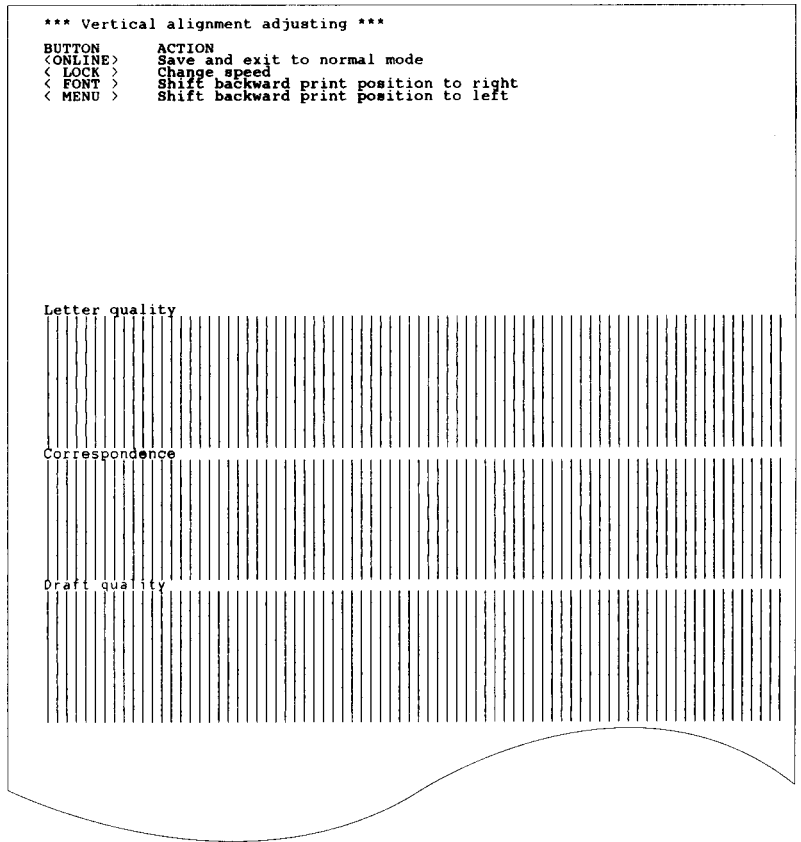
Correct vertical print alignment

SETUP MODE REFERENCE   The following flowchart shows how setup mode is organized for the Fujitsu DPL24C PLUS emulation. Differences in the IBM Proprinter XL24E and Epson ESC/P2 emulations are summarized after the flowchart.

Setup Mode

DPL24C PLUS ORGANIZATION

Note:
Asterisks (*) indicate default settings at shipment.

SETUP MODE

FUNCTIONS

(LOAD) or (LF/FF)
Move yellow arrow on the print head.

(MENU) or (TEAR OFF)
Select function.

ITEMS & OPTIONS

(LOAD) or (LF/FF)
Move yellow arrow on the print head.

(MENU) Select option, print next item.

ONLINE

(TEAR OFF)
Select option, print previous item.

SETUP MODE

SAVE&END   MENU1

MENU2

EMULATE: DPL24C+*
XL24E
ESC/P2

FONT: COUR 10*   COUR-N
PRSTG12   COUR-B
COMPRSD   COUR-I
BOLDFCE   N.SAN-N
PICA10   N.SAN-B
CORRESP   N.SAN-I
OCR-B   TIMLS-N
OCR-A   TIMLS-B
             TIMLS-I
             DOWNLD#

QUALITY: LETTER*
REPORT
DRAFT
HI-DRFT

PITCH: 2.5 CPI
3 CPI
5 CPI
6 CPI
10 CPI*
12 CPI
15 CPI
17 CPI
18 CPI
20 CPI
PROP SP

LINE SP: 1 LPI
2 LPI
3 LPI
4 LPI
5 LPI
6 LPI*
7 LPI
8 LPI

CHAR-W: NORMAL*
2 TIMES
4 TIMES

CHAR-H: NORMAL*
2 TIMES
4 TIMES

ATTRIB: NONE*
ITALICS
CONDNSD
SHADOW
BOLD

PAGE LG: 3.0 IN
3.5 IN
4.0 IN
5.0 IN
5.5 IN
6.0 IN
7.0 IN
8.0 IN
8.5 IN
11.0 IN*
11.6 IN
12.0 IN
14.0 IN
18.0 IN

LFT-END: 1 COLM*
2 COLM
3 COLM
4 COLM
•
•
•
40 COLM
41 COLM

TOP-MRC: 1 LINE*
2 LINE
3 LINE
•
•
•
10 LINE

LANGUGE: USA   PG855   PG-DHN
UK   PG866   LATIN-P
GERMAN   HUNGARY   ISO-LTN
FRENCH   HUNG-T   LITHUA1
ITALIAN   SLOV   LITHUA2
SPANISH   SLOV-T   MIK
SWEDISH   POLISH   MACEDON
DANISH1   POLSH-T   PG-MAC
PAGE437*   MAZOWIA   ELOT927
PAGE850   MAZOW-T   ABG
PAGE860   LATIN2   ABY
PAGE863   LATN2-T   DEC GR
PAGE865   KAMENIC   HBR-OLD
ECMA94   KAMEN-T   PG862
DANISH2   TURKY   HBR-DEC
FINNISH   TURKY-T   GREEKII
NORWEGN   CYRILIC   ISO-TUK
ISO8859   IBM437   RUSCII
PG852   IBM851   LATAIN-9
PG852-T   ELOT928

CHR-SET: SET 2*
SET 1

PRF-SKP: NO-SKIP*
SKIP

ZEROFNT: NO-SLSH*
SLASH

DC3-CDE: ENABLE*
DISABLE

CR-CODE: CR ONLY*
CR & LF

LF-CODE: LF & CR*
LF ONLY

RGHTEND: WRAP*
OVR-PRT

== END ==

HARDWRE | ADJUST | CONFIG | DEFAULT | LIST | SELF-TST | HEX-DUMP | V-ALMNT

TEAROFF: MANUAL*
AUTO

TEARPOS: VISIBLE*
ALWAYS

TEAR-EN: 0 SEC
1 SEC*
2 SEC
4 SEC
6 SEC

CUTLOAD: AUTO
BUTTON*

LOADTIM: 0.5 SEC
1.0 SEC*
1.5 SEC
2.0 SEC
2.5 SEC
3.0 SEC

Displayed when
TEAROFF=AUTO

Displayed when
CUTLOAD=AUTO

DECODE: DIRECT*
QUEUED

AREACNT: ENABLE
DISABLE*

ON-LOAD: OFFLINE
ONLINE*

LOCK: NONE*
SETUP
ALL

//S//: DISABLE*
ENABLE

CONT-PE: TRACTOR
EDGE*

== END ==

CNT-ORG: 1/6 IN
:
6/6 IN*
:
66/6 IN

CNTFINE: 0/180*
1/180
:
29/180

CNT-ORG: 1/6 IN
:
6/6 IN*
:
66/6 IN

CUTFINE: 0/180*
1/180
:
29/180

CNT-LFT: -10/90
-9/90
:
0/90*
:
10/90

CUT-LFT: -10/90
-9/90
:
0/90*
:
10/90

CUT-ADJ: -22/360
-21/360
:
0/360*
:
+22/360

== END ==

Dual
interface?

No

Yes

PARALEL?

Yes

No

PPR-OUT: CNTONLY
DETECT*
IGNORE

PRT-DIR: BI-DIR*
UNI-DIR

BUZZER: ON*
OFF

WORD-LG: 8 BIT*
7 BIT

BUFFER: NONE
256 BYTE
2K BYTE
8K BYTE*
24K BYTE
32K BYTE
96K BYTE
128K BYT

INTRFCE:PARALEL
SERIAL
USB
AUTO-2S*
AUTO-4S
AUTO-6S
AUTO-10S
AUTO-15S
AUTO-20S

FORMAT: 8NONE1* 7ODD1
8NONE2 7MARK1
8EVEN1 7SPACE1
8ODD1 7EVEN
7EVEN1 7ODD2

BAUD-RT:150
300
600
1200
2400
4800
9600*
19200

PROTOCL: XON/XOF*
DTR
REV-CHL

DSR: IGNORE*
DETECT

DUPLEX: FULL*
HALF

CTS: IGNORE*
DETECT

CD: IGNORE*
DETECT

== END ==

Setup Mode

Differences in IBM Proprinter XL24E Emulation

In the IBM Proprinter XL24E emulation, MENU1 and MENU2 differ from
the DPL24C PLUS emulation in the following ways:

- The following options are different:

```
⤵─────────────┬──────────────────────────┬────────────⤴
┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐
│ CHAR-W: NORMAL * │   │ CHAR-H: NORMAL * │   │ ATTRIB: NONE   * │
│         2 TIMES  │   │         2 TIMES  │   │         ITALIC   │
└──────────────────┘   └──────────────────┘   │         SHADOW   │
                                               │         BOLD     │
                                               └──────────────────┘
```

- The AGM item is provided:

```
⤵─────────────┬──────────────────────────┬────────────⤴
┌──────────────────┐   ┌──────────────────┐   ┌──────────────────────┐
│ CHR-SET: SET 2 * │   │ AGM:  OFF *      │   │ PRF-SKIP: NO-SKIP  * │
│          SET 1   │   │       ON         │   │           SKIP       │
└──────────────────┘   └──────────────────┘   └──────────────────────┘
```
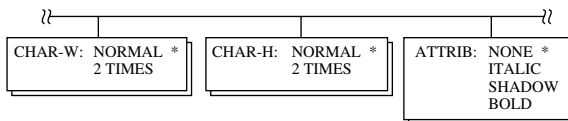
- The LF-CODE item's default is set to the other option:

```
⤵─────────────⤴
┌──────────────────┐
│ LF-CODE: LF & CR │
│          LF ONLY * │
└──────────────────┘
```

Differences in Epson ESC/P2 Emulation

In the Epson ESC/P2 emulation, MENU1 and MENU2 differ from the
DPL24C PLUS emulation in the following ways:

- The ZEROFNT and LF-CODE items are not defined.

- The following options are different:

PAGE LG:	4.0 IN
	4.5 IN
	5.0 IN
	5.5 IN
	¥
	¥
	¥
	11.0 IN
	11.5 IN *
	¥
	¥
	¥
	22.0 IN

LANGUGE:	USA	LATIN2
	UK	LATN2-T
	GERMAN	KAMENIC
	SWEDISH	KAMEN-T
	DANISH1	TURKY
	ITALIAN	TURKY-T
	SPANSH1	CYRILIC
	SPANSH2	IBM437
	JAPAN	IBM851
	NORWEGN	ELOT928
	LATIN A	PG-DHN
	FRENCH	LATIN-P
	PAGE437*	ISO-LTN
	PAGE850	LITHUA1
	PAGE860	LITHUA2
	PAGE863	MIK
	PAGE865	MACEDON
	ECMA94	PG-MAC
	DANISH2	ELOT927
	ISO8859	ABG
	PG852	ABY
	PG852-T	DEC GR
	PG855	HBR-OLD
	PG866	PG862
	HUNGARY	HBR-DEC
	HUNG-T	GREEKII
	SLOV	ISO-TUK
	SLOV-T	KOREA
	POLISH	LEGAL
	POLSH-T	RUSCII
	MAZOWIA	LATIN-9
	MAZOW-T	

CHR-SET:	ITALIC *
	GRAPHIC

Setup Mode

ONLINE SETUP MODE

The preceding sections describe offline setup mode. This section introduces online setup mode. The tedious task of setting up printer features one-by-one from the control panel and printing and checking the desired options on paper can be avoided by using online setup mode. In online setup mode, printer features are set via the computer rather than the printer control panel.

Put the printer in online setup mode, in either of the following two ways:

- Turn the printer off and then turn the printer back on while pressing the MENU button. Hold down the button until the printer beeps.

- Issue the printer command ESC e ONLINE. This command is valid in any emulation.

Send setup data from the computer in any of the following three ways:

- Enter setup data directly from the computer keyboard before starting your job. With MS-DOS, hold down the Ctrl key and type P. Data entered from the keyboard is sent directly to the printer. When data entry is complete, hold down the Ctrl key again and type P. This method is useful when just a few settings need to be changed.

- Use an editor program to prepare a setup data file and then send the file to the printer using a command before starting your job. With MS-DOS, use the COPY command. This method is useful when settings are used repeatedly.

- Write a program that enables interactive entry of setup data on the CRT screen. This method is the most useful of the three. Check with your dealer for currently available programs.

To exit from online setup mode, send EXIT as the last setup data.

For details of setup data and its format, refer to the programmer's manual for each emulation.